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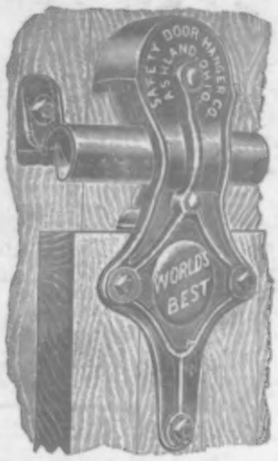
The American Artisan
And Hardware Record

Vol. 56. No. 12. CHICAGO, SEPTEMBER 19, 1908. $2.00 Per Year.

All Kinds of
BOLTS, RIVETS, NUTS, WASHERS,
CARRIAGE FORGINGS, ETC.
Send for 1908 Catalog "R." Prices on Application
COLUMBUS BOLT WORKS, Columbus, O.

GET THE LIVE LINE
"AMERICAN SEAL"
Elastic Oil Roofing Cement,
Stove Putty and Asbestos
Furnace Cement
For Furnaces, Stoves, Ranges and Roofs.
Jobbers write to-day for prices
THE
Wm. Connors Paint Mfg. Co.
Makers. TROY, N. Y.
Western Agents: Friedley-Voshardt Co., 194 Mather St., Chicago, Ill.
Southwestern Agents: Stockhoff Supply Co., 107 N. Main St., St. Louis, Mo.

NEW DESIGN WORLD'S BEST
TUBULAR TRACK DOOR HANGER


We have increased the diameter of the wheel to 2¼ in., making it the easiest running Hanger on the market.
The supplementary wheel prevents derailment. Frame is made of the best grade malleable iron. Finished in Aluminum and each pair packed in an individual box, complete with bolts. The track brackets are slidable and may be placed at any point desired. We do not sell catalog houses. Write for prices.
SAFETY DOOR HANGER CO.
Manufacturers
Ashland, Ohio Hamilton, Ont., Can.

"NEVER-BREAK"
TRADE MARK

Catalog Free
"NEVER-BREAK"
STEEL SPIDERS, GRIDDLES AND KETTLES
WILL NOT Scale Off like cheap enamel.
WILL NOT Scorch or Burn like light fry pans and skillets.
WILL NOT Absorb Grease or Flavors like cast Iron.
THE AVERY STAMPING CO.
CLEVELAND, OHIO
Sole Manufacturers
"NEVER-BREAK" Goods.

Trying to do business without advertising is like winking at a girl in the dark; you know what you are doing but nobody else does.

BUY, SELL AND USE
FILES
bearing the Trade Mark
FILES OF QUALITY
DELTA
TRADE MARK DELTA
And Thus Eliminate All Chances
Manufactured by an independent organization; not connected with any trust in any form, shape or manner.
CARVER FILE CO., Philadelphia, Pa.

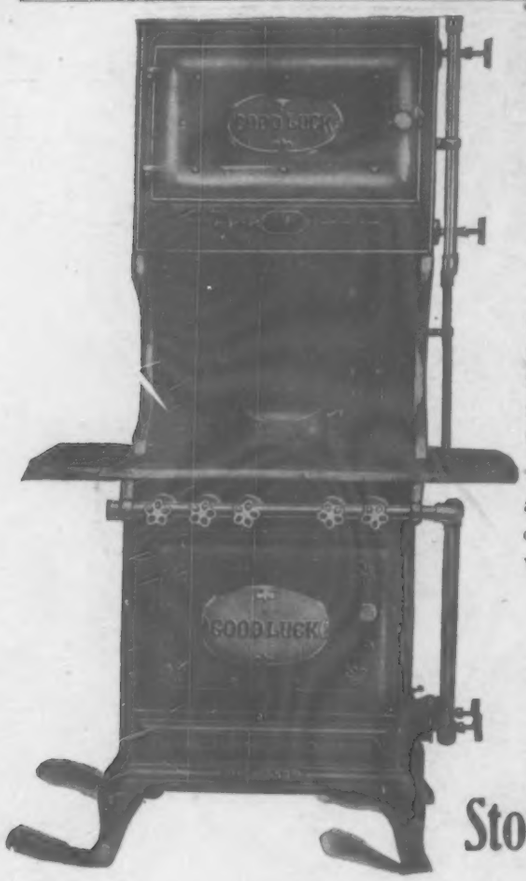
MATCHLESS
Spring and Pivot Hinges
Floor Hinges, Jamb Hinges and Hardware Specialties.
The fact that Matchless Spring Hinges have been on the market since 1895 and that in that time not one set has required repairs from fault of hinge speaks very well for their serviceability and wearing qualities.
If your Jobber cannot furnish them write us.
LAWSON MFG. CO.
40 Dearborn St., Chicago, Ill.

PULLMAN
SASH BALANCES

Are you selling them?
IN USE EVERYWHERE
Send us your orders
PULLMAN MFG. COMPANY
SOPHIA STREET
ROCHESTER, N. Y., U. S. A

Porcelain Enamel Formulas
Any kind or color, for cast iron and sheet steel, with full instructions.
Start new—and improve quality of ware in old plants.
34 Years' Practical Experience
JOHN PEIL, Columbus, O.

100 Tinners' Patterns
Complete for
$1.00
Sent Postpaid on Receipt of Price
Daniel Stern
355 Dearborn Street - Chicago



Good Luck Gas Ranges

PERFECT PASTRY BAKERS

"ANGEL FOOD" EASILY AS "DEVIL CAKE" AND BISCUITS LIKE A PICTURE

To test the reliability of any Elevated Oven Gas Range, **try baking Angel Food.** This should be baked in a "moderate oven" for 40 minutes. It is very delicate and the opening and closing of the doors to "take a peep" will vibrate most elevated ovens so that delicate pastry will "fall" and then the "jig is up"—the baking is ruined.

Good Luck Elevated Ovens do not vibrate. We have another thing to tell you. A pan of biscuits placed in this oven and left without the slightest attention until baked were found perfectly uniform in crust and color.

There is a very good reason for this.

Buckwheat Cakes and Sausage

"BEHIND CLOSED DOORS"—NO SMOKE

Stove and Range Co. of Pittsburgh

PITTSBURGH, PA.

The Patented Square Pot and Square Grate

Used in all Boynton Square Pot Furnaces

There are two things to be considered in our Patented Square Pot Furnaces which should certainly appeal to you. One is that it is the latest and most important improvement in the manufacture of Warm Air Furnaces and the other is its easy saleability which means more money in it for you.

Remember we make the only furnaces that have square pots permitting free combustion and rapid clearance of ashes.

Write for Descriptive Circulars.

The BOYNTON FURNACE CO.

147-149 Lake St., Chicago **207-209 Water St., New York**

A STRAIGHT UP-AND-DOWN PROPOSITION

HANDLE THE

MONITOR RADIATOR

SEE
Where we get
1683
Square inches
More Radiating Surface Than any Other Stove Has.

and make

MORE SALES, MORE MONEY

and many

MORE SATISFIED CUSTOMERS.

Delighted dealers all over the country are making more money on this

Base Burner With Five Front Flues

than they have ever made before handling other stoves.

Get in line today for ***Bigger Sales and Profits*** by writing to the manufacturers for full descriptive matter.

Sectional View Showing Circulation

THE MONITOR STOVE AND RANGE CO.

Manufacturers

CINCINNATI, OHIO

Distributors

For the State of Michigan, Morley Bros., Saginaw, Michigan.
For the State of Minnesota and North West, The Great Western Stove & Repair Co., Minneapolis, Minnesota.
For the State of Wisconsin, Morley Murphy Hardware Co., Green Bay, Wis.
For the States of Nebraska, Wyoming, Western Iowa and the Black Hills, Paxton & Gallagher Co., Omaha, Nebraska.

"The Greatest Light of The Age"

"Conia"

These Conia Burners give a light from **100** to **350** Candle Power, and the flame can be regulated to any desired height. Positively smokeless, and on account of the enormous candle power will not blacken the mantle.

Mantles in ordinary use will last at least a year.

Retail Price, 35 Cts.

Burners, complete to fit

Standard Oil Company's "Rayo"

Central Draught Lamp, **$3.50.**

Retail Price, Table Lamp complete, **$5.50**

Write today. We want agents in open territory.

The New Kerosene Incandescent Central Draught Lamp

Model 1909

The Conia Burners can also be used on the

Standard Oil Company's "Rayo" Lamp.

It is the Greatest Light for private Residences, Halls, Porches, Country Stores, Churches and Public Buildings.

Chimneys are made in Jena, Germany and will not break from heat.

Retail Price, 35 Cts.

G. Cohn & Co.

(Inc.)

337 Broadway

NEW YORK

"BENGALIA"
Alcohol Blue Flame Cooking Stoves

IDEAL, ODORLESS INTENSE HEATERS

Strong in Construction, Simple and

Far Superior to Any Oil Stove

No. 19 Retail Price, $3.50 Each

No household is complete without one of these alcohol stoves. They are the cleanest and most convenient stoves made and their utility is always readily appreciated wherever they are shown. They are quick boilers (one quart of water will boil in 4½ minutes) and their price puts them in reach of all.

No. 15 With Regulator, Retail Price $2.90 Each

There is an urgent demand for these alcohol stoves wherever their merits are known and the dealers who are handling them find that they are quick sellers and good money-makers.

No. 17 With Regulator and Brass Fount. Price $2.50 Each

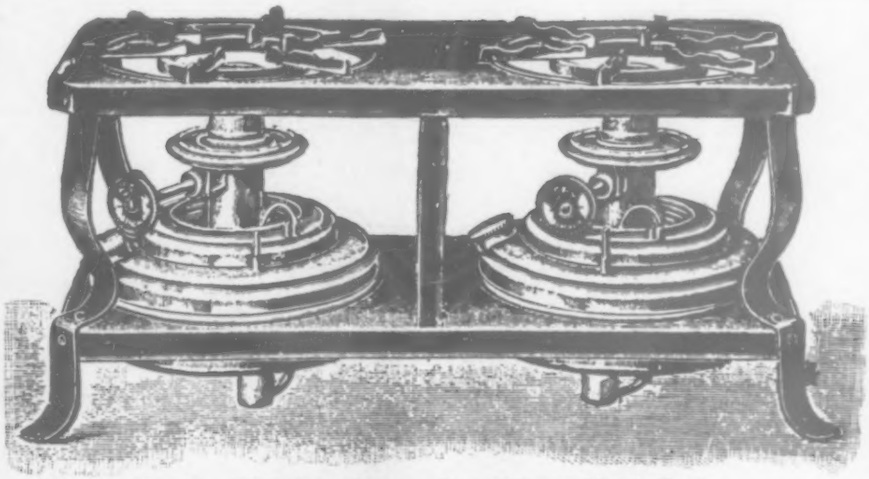
Will Last a Lifetime

—

Economical and Unexcelled

—

Perfectly Constructed



No. 16 With Regulators; Retail Price $5.00 Each.

Absolutely Secure from Explosion or Danger from Fire

—

Extremely Simple

—

Strong and Reliable

We want live dealers in every community to write us to-day for catalog and price lists.

G. COHN & CO., (Inc.)

337 Broadway New York City

ACTUAL SIZE, 3¾" x 5"
Lithographed in Two Colors

¶ One *Very* Good Reason Why it Pays Dealers to Handle BORN'S STEEL RANGES is Because We help them to sell the goods

¶ We Supply them Liberally with

Attractive printed matter;
Signs to put up along the roads;
Handsome signs for the store fronts and windows;
Catchy novelties—such as the Match Safe here illustrated;
Cuts and copy for local newspaper Ads; and,
Selling Plans through our monthly "News Letter."

¶ In addition to all this, we advertise the goods in the popular family magazines, farm papers and local newspapers, thus creating a demand which benefits every BORN RANGE AGENT—no matter where located.

If no one has the Agency for your locality, it might pay you to get our Catalogue and proposition.

THE BORN STEEL RANGE CO., CLEVELAND, O.

SPLENDID IRVING

A "High Grade" Range at a Medium Price!

The Splendid Irving is one of our newest productions, built in the usual superior manner, characteristic of our manufacture finelv finished and perfect in every way.

All Nickel Parts Lift Off

Write for our new Catalog Just Out!

THE FLOYD-WELLS CO., ROYERSFORD, PA. 83 Kinzie St., CHICAGO

HERE'S A "SURE THING"

No. 2500
Weight
435 lbs.
Price Net
$21.85

Dealers everywhere are looking for something in the range line that they can be sure of. Sure that it is a little better than anything their competitor has. Sure that they are safe in selling it. Sure that it will give absolute satisfaction and make friends for his business. We offer just such ranges in

LANDAY
Matchless Steel Ranges

the ranges built to exactly meet the demands of the masses and which loom up as **Trade Winners** every time. They have **ALL THE ESSENTIAL QUALITIES** of the perfect range—**Durability, Service, Reliability, Appearance, First-class Construction.** We guarantee the fire linings of every one of our ranges for three years. If they burn out within that period, **we will replace them.** Dealers run no risk when they sell **Matchless Ranges** on their recommendations. They are a mighty safe proposition.

Now Write for our Catalog Today

IT'S FOR THE GOOD OF YOUR BUSINESS

Choice Territory Open For Hustling Salesmen.

LANDAY STEEL RANGE CO., 2621 N. 15th St., St. Louis, Mo.

FOSTER'S BONANZA

With Our Patented Removable Oven Plate

A Range with selling features which make it a most profitable one for the trade to handle

A SPECIAL FEATURE is the Removable Top and Front Oven Plate. By a patented method, either oven plate can be replaced in fifteen minutes time by removing the covers of the Range and taking out three bolts.

This is a most convenient range for the consumer, as high shelf, high closet or reservoir can be added at any time.

It has a balanced drop oven door and is a complete and satisfactory range in every detail.

As trade winners Foster's Ranges are without a peer on the market. They are money makers for the dealer and a satisfaction to the consumer.

Write for Our Catalog

THE FOSTER STOVE CO.

IRONTON, OHIO

KING QUALITY

In Entirely New Dress

Burns Soft Coal, Hard Coal, Coke or Wood.

King Quality Steel Ranges

are built with a view of making them the highest standard of excellence, leading in utility, economy and convenience.

The King Quality is a beautiful Range, sure to catch the eye of every housekeeper, and with so many exclusive features that the dealer can use as selling points, that sales are easy. **The King Quality** is made with either Cabinet or Cast Leg Base.

Write today for particulars.

Quality Stove & Range Co.
BELLEVILLE, ILL.

PLACE YOUR ORDERS

With the Old Reliable

OHIO STOVE CO.

STOVES AND RANGES

SATISFACTORY SERVICE ASSURED UNDER ENTIRE NEW MANAGEMENT

PORTSMOUTH, O.

MR. DEALER!

Are You the Man

looking for a specialty that will attract trade, yielding a good profit?

It Will Pay You

to get acquainted with the quality features of
THE IMPROVED PATENTED

PRINCESS STEEL RANGE

Where it is known it commands the bulk of the trade.
Ask for Special Agency Proposition.

ALLEN MFG. CO., NASHVILLE, TENN.

Munsell's Mica

THE STANDARD

For High Grade Base Burners

EUGENE MUNSELL & CO., The Mica Headquarters

NEW YORK, 68 Church Street **CHICAGO, 358 Dearborn Street**

The GOLD COIN

A STOVE WITH AN EXCEPTIONALLY POWERFUL BASE RADIATION

Here is a Base Burner that NO dealer can afford to neglect giving his attention.

It has ALL of the features demanded by Stove users and some of its own that they will appreciate.

Powerful Radiation with economy in fuel consumption; simplicity and convenience of operation; durability; elegance and originality of design—These are all features and besides:—

This is the only Ventiduct Base Burner on the market—all others are imitations.

It offers a splendid opportunity to progressive dealers.

Write for Catalog to-day.

CHICAGO STOVE WORKS
Blue Island Ave. and 22nd St.
CHICAGO, ILL.

Simplicity, Durability, Economy and Capacity

All of which are essentials of the Really Good Furnace are featured in the

MONCRIEF

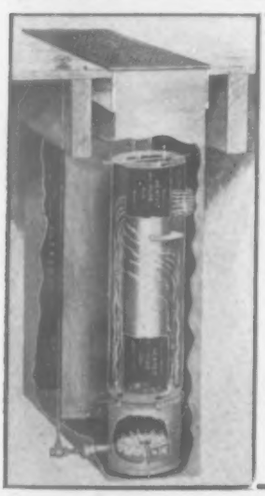
TOP RETURN FLUE WARM AIR FURNACE

In the MONCRIEF Furnace special attention has been paid to the little details, and efforts in that direction have not been wasted as they have assisted materially in making this a furnace which is unsurpassed for operation and durability.

FEATURES: Burns all grades of hard and soft coal; all cast iron; Moncrief Duplex Grate; large radiating surface; double fire-pot; large grate surface and cleanliness in use.

Write for Catalogue.

HENRY & SCHEIBLE CO.
825-29 Long Ave., N. W., Cleveland, Ohio
J. C. KIMMEL, 3314 E. 15th Street, Kansas City, Mo., Western Sales Agent.



Eriez Circulating Floor Furnace

For Natural or Artificial Gas

Takes the cold air from room down the cold air duct, passes it through the heater without allowing it to come into contact with burner combustion and out into room in a pure, heated condition. Positive circulation. **Products** of combustion pass between outer and inner heater drum, retarded by special flue system, to chimney. **Furnace** can be regulated by key at floor. **Fire Pot** made of Cast Iron. One-Piece center draft Cast Iron burner, adjustable mixer, heavy Globe Valve. **The outer jacket** is made of heavy galvanized Iron, lined with asbestos with an entire inner lining of galvanized iron. Five minutes after furnace is lighted it is possible to ignite a match at hot air register. Register border will be furnished if desired. Guaranteed odorless and free from dampness. Occupies no space in room to be heated. Hangs from floor. Is easily installed by anyone

Furnace List - - $30.00
Register Border List - $1.50

Write for discounts. Address Dept. A.

ERIEZ STOVE & MFG. CO., Erie, Pa., U. S. A.

We manufacture over eighty different sizes and styles of ranges. Thirty Gas Heaters, Sectional Burners and Gas Appliances. For complete Catalog address Dept. E.

The Monitor Radiator

BASE BURNER WITH FIVE FRONT FLUES

Has *1683 square inches* more Radiating surface than any other base burner made.

THE BIGGEST SELLER ON THE MARKET

You should secure the Agency at once. *Write to-day to*

Paxton & Gallagher Co.
OMAHA, NEB.

Exclusive Distributors for the West

The FUEL$AVER

Will Add $75 to $750 to Your Profits

¶ It's a new automatic heat regulator for furnaces. Keeps the temperature uniform. Reduces the coal bill 25%. Low in price and pays a big profit.

¶ Write for particulars today.

F. D. KEES MFG. CO., - Beatrice, Nebr.

Our Strictly New Furnace

Built to the Hour

A Powerful Perfect Worker

OUR NEW ONE

WHATEVER IS GOOD, NEW AND MODERN IN FURNACE MAKING HAS BEEN CONSIDERED IN THE PLANNING AND BUILDING OF THIS FURNACE. * HEAVY STEEL PLATE IS DESIRABLE FOR QUICK HEATING WE HAVE IT IN THE LARGE RETURN RADIATOR. * HEAVY CAST IRON IS DESIRABLE FOR DURABILITY IN FIRE SECTION, WE HAVE IT THERE. * LARGE DOORS ARE DESIRABLE, WE HAVE MADE THEM LARGE. * PROMPT RELIABLE ACTION IS ESSENTIAL, THEY ARE HERE CORRECTLY AFFORDED.

THERE IS NO MORE SATISFACTORY FURNACE THAN THIS. THEY MAY TIE IT BUT THEY CAN'T BEAT IT. HEAVY STEEL HIGH RETURN RADIATOR WITH CAST TOP AND BOTTOM. ASBESTOS PACKED JOINTS EVERYWHERE. BIG FIRE-POT, BIG ASH-PIT, BIG CLEAN-OUT, BIG DOORS GROUND TO PERFECT FITTING. HEAVY SEPARATE GRATE BARS. DUST TIGHT. GAS TIGHT. A VERY COMPLETE MODERN FURNACE THAT WILL SATISFY BOTH YOU AND YOUR CUSTOMERS.

WALTER S. RAIT & CO.

211-213 Lake Street, CHICAGO, ILLINOIS.

Magee Illustration No. 3

Magee "Cottage" Furnace

A strong, durable furnace, perfect in design and construction.

The celebrated Dock-Ash Grate, composed of four triangular bars, easily removed and replaced.

Fire-pot in two pieces, straight sides. Large Combustion Chamber.

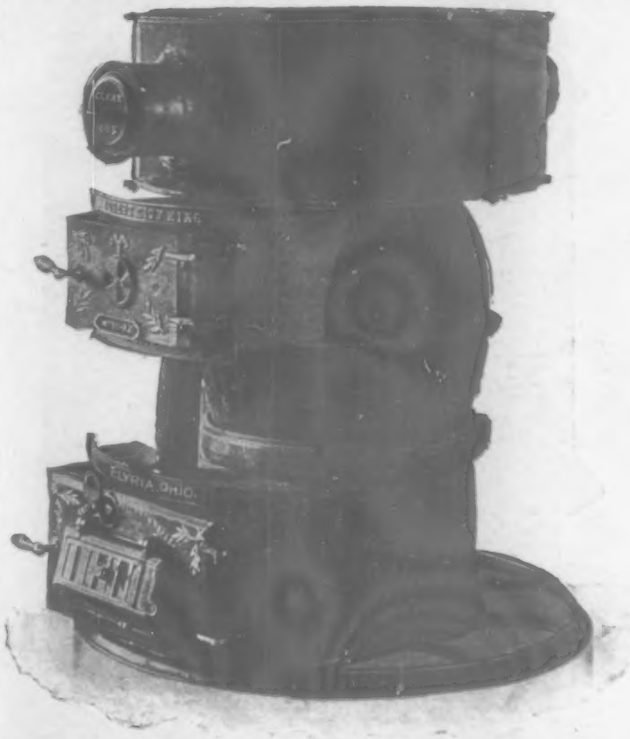
Wrought or Cast radiator with return flue insuring long smoke travel.

Coal economy, durability, ease of regulation and management, are the characteristics of the MAGEE "Cottage" Furnace.

Furnace Dealers should **write now** to get control of the **MAGEE** line in their territory.

MAGEE FURNACE CO., 86 East Lake Street, Chicago

1,000 Series Fox Furnaces



Do you have gas in your city?

Here is an attachment that goes in all **FOX FURNACES** that will burn gas economically and if the gas is shut off or gives out, you can burn coal without disconnecting or making any changes.

The gas comes in at the bottom of the fire pot and gives you the full radiation of the fire pots and the balance of the furnace.

Let us hear from you and we will send you catalogue and printed matter and save you dollars and give you a furnace that will build up your furnace business.

Our Motto is QUALITY

THE FOX FURNACE CO. :: Elyria, Ohio

The 4th in a Series of Reasons Why the KELSEY is the Best Warm Air System

The Immense Value of Pure, Warm Air and Perfect Ventilation

There is no longer any possible doubt but that inefficient ventilation is the direct cause of much sickness and ill health.

Experts in Hygiene and those who have studied the subject carefully agree that nothing will pull down the human system so quickly as breathing impure air,—nothing will build up the system so quickly as pure, fresh air and good ventilation.

With direct Steam or Hot Water Heating systems warm air is supplied, it is true,—but it's the same air heated over and over again. There is no attempt made at ventilation,—except the very small and uncertain quantity of outdoor air that enters through open doors and cracks around windows.

But with the KELSEY System, the air supplied is not only warm,—but it is pure, fresh air,—and plenty of it. The KELSEY supplies an immense volume of warm air,— not only enough for absolute comfort in all kinds of weather,—but also provides thoroughly positive ventilation.

This is due to the great KELSEY Heating surfaces, and the KELSEY method of warming and distributing fresh air, and the proof is found in the hundreds of letters from users in our book of "Opinions"

If you want to install a Heating System that fulfills, better than any other, every requirement for comfort and ventilation, we'd like to tell you more about the

KELSEY Warm Air GENERATOR
(Registered in U. S. Patent Office)

KELSEY HEATING COMPANY
SYRACUSE, N. Y.

NEW YORK, 156 Fifth Ave. **PHILADELPHIA, 24 So. 7th St.**
CHICAGO, Van Evera & Lewis Mfg. Co., 104-106 W. Lake St.
James Smart Mfg. Co., BROCKVILLE, Ont., Sole Makers for Canada

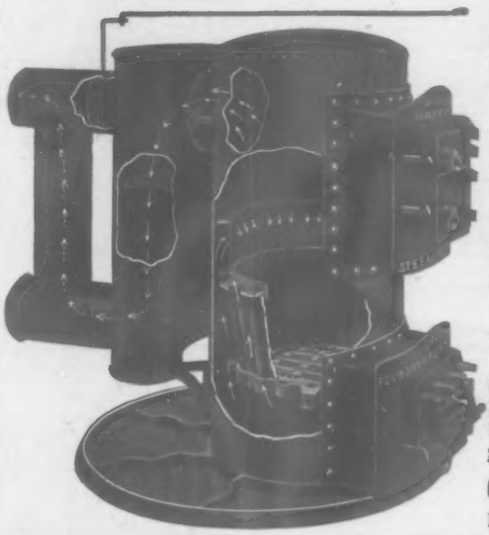
Monarch Air Blast

All the advantages of our famous MONARCH plus the air blast. This is a sectional upper fire pot constructed so that oxygen is fed into and above the fuel burning the gases, assuring economy and cleanliness. It is the most practical soft coal furnace offered the trade.

Forest City Foundry & Mfg. Co.
CLEVELAND, OHIO

Mfrs. The Imperial, Niagara and Combination Furnaces, Registers, Mail Boxes, Hitching and Sash Weights, Etc. Write for our new Catalog.

Your Furnace Business



in 1908 will be much larger than it was in 1907, if you can show your prospective customers something better than your competitor is showing. Why not sell a furnace combining all of the desirable features of furnace heating?

GREEN'S BASE HEATER

is built with a **slotted fire pot,** thoroughly consuming the smoke and gases, and **reducing the cost of fuel.** The fire pot is the most durable of any used in Steel Furnaces as the **ashes cannot accumulate behind it.** The heat penetrating through the pot and steel surrounding it, makes **every inch of this furnace heating surface from the bottom plate to the top.** A powerful heater, something good which your customer will appreciate, something better than your competitor can show. Large radiator with **long smoke travel; double feed doors;** grate bars which operate **independently of one another,** with hollow centers, deep ash pit. A furnace which **costs no more than any good furnace,** but heavy, durable, combining all of the **advantageous features of furnace heating.** **Write for our Catalogue.**

Green Foundry & Furnace Works

Dept. "A" :: **DES MOINES, IOWA**

ILLUSTRATED CATALOG FREE WRITE FOR IT

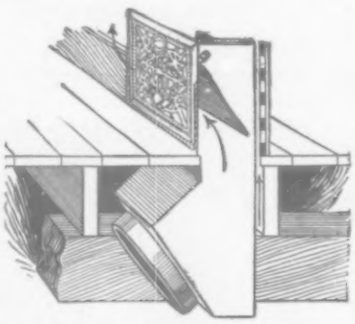
GILT EDGE WARM AIR AND COMBINATION HEATERS LEAD. SCHWAB SIDE WALL REGISTERS ARE BUILT BETTER THAN OTHER MAKES.

SELL THE GILT EDGE FURNACES and SCHWAB SIDE WALL REGISTERS

From the first design to the finished product our goods are made in our own factory and under our own supervision. They are without competition in quality and construction. Over thirty years of experience have proved that the principles of construction are correct.

Our Complete Facilities Are at Your Service

We welcome your careful investigation of our products.



R. J. SCHWAB & SONS CO., Milwaukee, Wis.

GILT EDGE FURNACES FOR ALL FUELS. SCHWAB PIPE AND FITTINGS DO FIT—USE THEM—PRICE RIGHT TOO.

BOOKLET MODERN METHODS FREE WRITE FOR IT

A New Low-Down Crown Cast Iron Warm Air Furnace

Less the all cast front. For hard or soft coal. Very powerful. All parts extra heavy, and adapted to severe usage. Price such that it CAN BE SOLD AT A PROFIT in any territory.

MADE IN THE FOLLOWING SIZES:

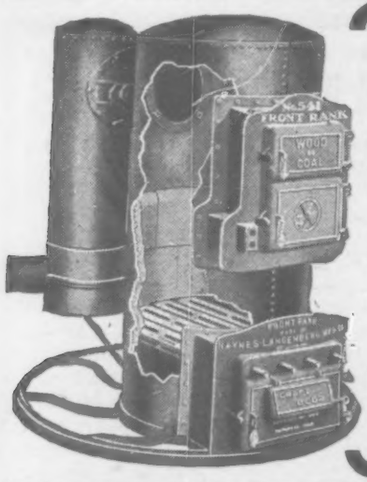
Sizes.	Diameter of Casings.	Diameter of Firepot.	Height of Castings—less feet.	Diameter of Smoke Pipe.
No. 132	32 inch	18 inch	43 inch	7 or 8 inch
No. 136	36 inch	21 inch	45 inch	7 or 8 inch
No. 140	40 inch	23 inch	48 inch	7 or 8 inch

Furnished with Feet and Front Support when Desired.

WRITE FOR CATALOG. *EVERYBODY LIKES THIS FURNACE.*

The MARCH-BROWNBACK STOVE CO.

Makers of "Low Down" Furnaces. **POTTSTOWN, PA.**



A Furnace That's Different!

You know as well as we do that almost all furnaces are alike in construction—and that your competitor can quote just as low a price as you.

With this FRONT RANK Furnace you can go after a prospective customer with a line of argument that is entirely different.

The FRONT RANK is made of heavy sheet armor plate, riveted like a boiler. It can't bulge apart, and it can't leak gas.

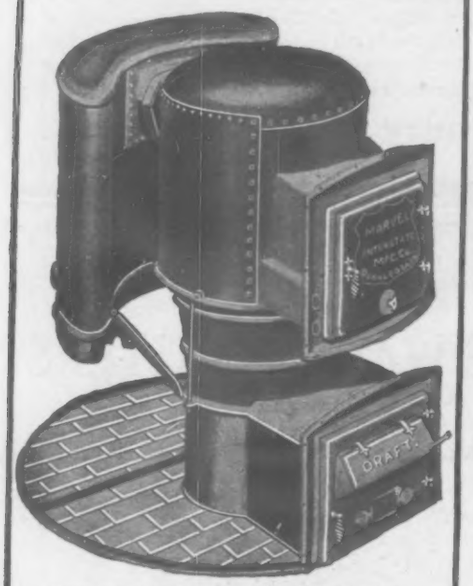
There are no "cup joints" in which the cement can shrivel up and allow gas to escape.

The FRONT RANK Furnace offers a mighty fine opportunity to one good dealer in each town.

Do you want our proposition?

HAYNES-LANGENBERG MFG. COMPANY

4045-57 Forest Park Blvd., ST. LOUIS

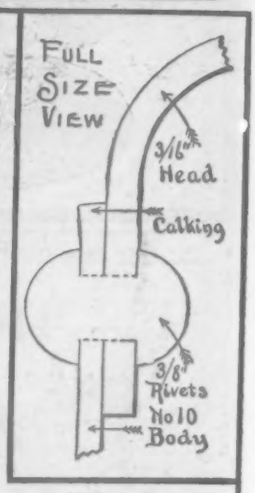


FURNACE WITH CAST FIRE POT.

800 Series

MARVEL HEAT PRODUCERS

BETTER FURNACES



Large Powerful Heating Surfaces.

Two-Piece Cast Iron Pot.

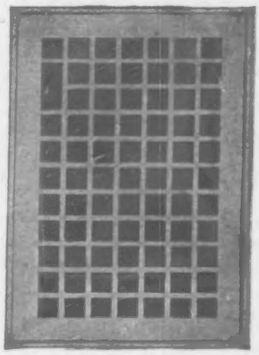
Flat Dumping and Shaking Grate, or Marvel Triangular Bar Grate.

Large Feed Door. Well Made.

WRITE FOR CIRCULAR.

INTERSTATE MANUFACTURING COMPANY

OSKALOOSA, IOWA



Variety—Quality—Efficiency

168 Sizes Floor Registers in five designs Vertical Wheel.
84 Sizes Floor Registers in two designs Glide Movement.
37 Sizes Convex Registers in three designs.
11 Sizes Circular Top Registers in two designs.
14 Sizes Round Registers in two designs.
42 Sizes Mouse Proof Vent Plates.
4 Sizes Convex Base Vents.
10 Sizes Special Side Wall Registers in three designs.
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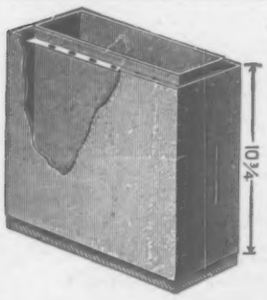
Every known special and Stock Finish. Write for our Catalog and discounts.

FERROSTEEL COMPANY, Cleveland, Ohio



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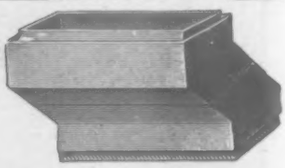

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DETROIT, MICHIGAN

Manufacturers of Safety Wall Pipe, Single Pipe and Fittings in Both Tin and Galvanized Iron.

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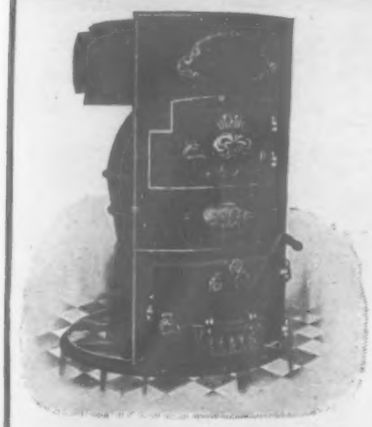
We Want Your Business And Are Able To Take Care Of It.

We belong to no combination. Do not get our name confused with other manufacturers.



OUR NEW DE HAVEN ALL CAST FURNACE

Strictly Modern and Up-to-Date in Every Respect

All the latest features in modern furnace construction are embodied in the make-up of this furnace.

FEATURES: Extra Heavy; Gas Tight; Burns all grades of Hard Coal, Soft Coal and Wood; Simple and Economical to Operate; Top Return Flue Radiator; Large Radiating Surface; Roller Bar Grate.

Write to-day for Catalog and Prices.

Youngstown Furnace & Supply Company

NILES, OHIO

Manufacturers of the Celebrated LION-APEX and BESSEMER Series of Furnaces.

Chicago Branch
218 East Lake Street

ROOD & McINTYRE
Kansas City, Mo., Southwestern Distributers

What's the odds who is elected

TAFT or BRYAN WISE Furnaces

will sell anyway.

Secure the Agency and YOU will win the victory.

The WISE FURNACE CO., Akron, Ohio

American Furnaces

Built upon Hygienic and Modern Principles

American Heaters are strictly Air Heaters, clean and tight like a boiler, undoubtedly the most sanitary furnaces upon the market. All the joints in these heavy Steel Furnaces are absolutely tight, being riveted by pressure and not by hammering, an improved method which not only insures perfectly tight joints but forces the parts together until they form almost a solid piece of metal.

DEALERS: A Sample Furnace will be shipped to any responsible dealer in the United States and if after a careful examination (we allow you 30 days) it does not prove entirely satisfactory, it can be returned at our expense.

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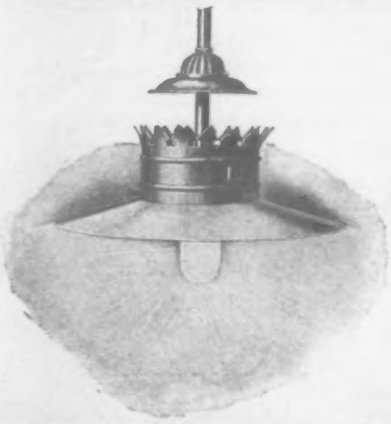
THE AMERICAN FURNACE CO., 1911-15 Pine St, ST. LOUIS, MO.



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Requires No Generating

Nothing like it now on the market. No worry, no work, no odor, no smoke. NOISELESS. Will light a store 100x30 ft. two hours a night for 10c. a week. Always ready for instant use. Turn on the gas and light the same as city gas. Can be installed for a very small amount.

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Department No. 31 Lake and Curtis Streets Chicago, Ill.

IT'S TO YOUR ADVANTAGE

to sell the

"MUELLER"

¶ Price competition has greatly reduced the profit on furnace work. This reduction in profit can only be avoided by selling a heater that is out of the competition class.

¶ The "MUELLER" All Cast, Double Radiator furnace is in a class of its own. No other heater made like it, and none as Powerful, Durable and Economical.

¶ "MUELLER" Heaters are easier sold, and at a larger margin of profit than competition furnaces. RESULT—INCREASED SALES and PROFITS FOR YOU.

¶ Let us have your inquiry for prices and agency proposition.

L. J. MUELLER FURNACE COMPANY

191 REED STREET **ESTABLISHED 1857** **MILWAUKEE, WIS.**

The Hero Furnace

For any kind of Fuel

Showing Smith's Cleanable Water Heater

Cast or Steel Radiator.

Large Double Feed Doors.

Independent Grate Bars.

Everything an up-to-date furnace should have.

Catalog tells all about it, also about our

New Hero Boilers

CHAS. SMITH COMPANY

101 East Lake Street, CHICAGO, ILL.

Floral City Capitol Furnace

Like all **Floral City Furnaces,** the **CAPITOL** has embodied in its construction all the best features of the up-to-date furnace. The result is a **durable, powerful** and **economical heater.** It's most important feature is the Dome or Body with the outer return flue, or

HORSE-SHOE RADIATOR

The Dome is high enough to give an extra large combustion chamber but the furnace is low enough to fit in shallow basements.

This furnace is heavily constructed and will give the most satisfactory service.

WRITE FOR CATALOG OF OUR ENTIRE LINE.

MONROE FOUNDRY & FURNACE CO., Monroe, Michigan

OUR NEW ONE

This is a strictly up-to-date, modern furnace.

Every improvement necessary to make it the Best on the market has been embodied in its construction.

Built to give perfect service of the best materials, it is a most reliable and powerful heater and will give complete satisfaction. Write for printed matter of our complete line.

Walter S. Rait & Co.
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Hot Water Combination Boilers

THEY FIT ANY FURNACE

One or more sections can be used together according to the amount of radiation to be used. The fire passing through spaces between rings in each section and over their large surfaces permits the direct action of the fire to come in contact with each section, making a powerful and effective heater. **Champion Boilers** are tested to 100 pounds hydraulic pressure before leaving the factory and are guaranteed not to leak. Will increase every dealer's business who handles them. Prices, measurements, etc. upon application to

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A-B Liquid Stove Polish

A Varnish Polish to Be Used Only on Cold Stoves.

Smokeless and Odorless

Over 1,000,000 Bottles used annually in Chicago.

This is a pure oil polish that will not freeze.

Contains no soap or sticky gum, and an old newspaper or rag will shine it.

A Brilliant Polish that will not chip off!

We make the BEST Metal Polishes and Iron Enamels on the Market.

A-B POLISH CO.

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We Make It!

The BEST Air Drying Iron Enamel Made.

Try a 1-Dozen Case From Your Jobber

Nickel Plate Stove Polish Co.
CHICAGO.

Large 10 oz. Can.

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100 TINNERS' PATTERNS

COMPLETE FOR

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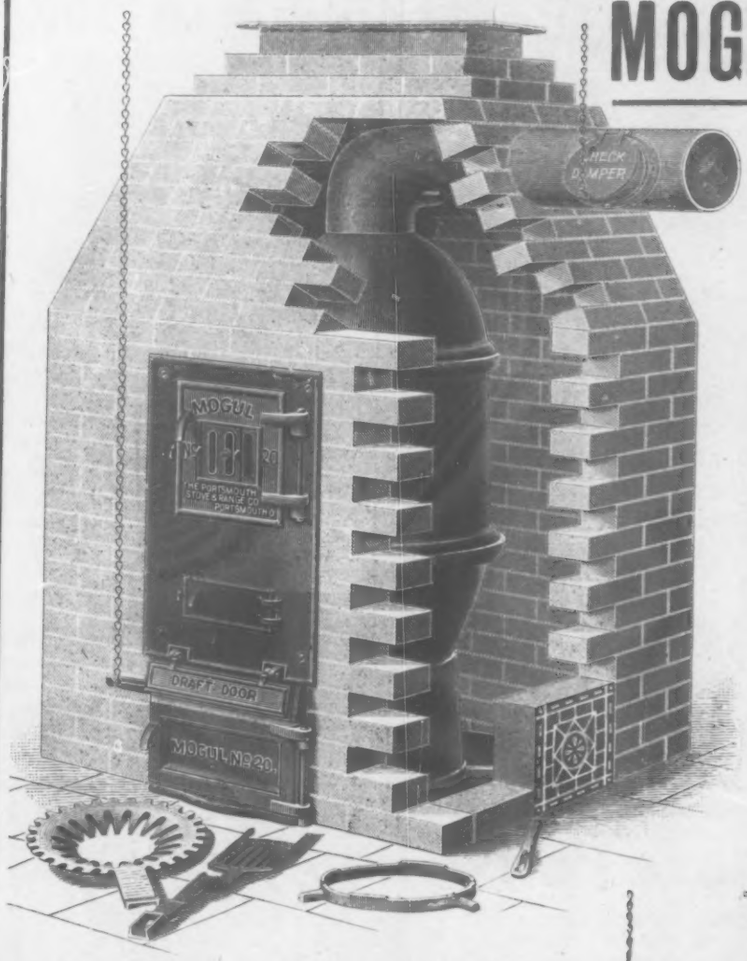
DANIEL STERN,
355 Dearborn St. CHICAGO.

MOGUL FURNACE



(BRICK SET)

"THE FURNACE WITH A RECORD"

"Ask the Man" who has one how it moves **"Hot Air"** in the right direction and **lots of it, too;** with very little fuel or attention. It is as simple to manage as an Oak Stove.

You can burn

HARD COAL
SOFT COAL
OR COKE

and **no clogging up of flues.**

You can sell and set up this furnace for $75.00 and have more than three times the profit you can get on a hard coal base burner. Don't this look good to you?

MOGUL FURNACE

With Galvanized Iron Casing

Water Coil may be used for heating radiators, or water for bath tub and sink, at very small cost for installation, and NO EXTRA COST FOR FUEL to operate furnace.

This is the furnace that has "earned a reputation" that sells it. Don't be misled and buy imitations brought out by the MOGUL'S wonderful popularity. **Get the Real Thing.**

Don't Experiment with an imitation. Remember the name "MOGUL."

Costs you nothing to learn all about it.

The Portsmouth Stove & Range Co.

Portsmouth, Ohio

OTTO HARNISCH
1111 Sheridan Avenue, Saginaw
Michigan Representative

ESTABLISHED 1880.

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Representative of the Stove, Tin, Hardware, Heating and Ventilating Interests.

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355 DEARBORN STREET, CHICAGO, ILL.

Entered as Second-Class Matter June 25, 1885, at the Post Office at Chicago, Illinois, under Act of March 3rd, 1879.

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CHICAGO, SEPTEMBER 19, 1908.

THE National Industrial Traffic League, composed of large manufacturing and mercantile concerns, adopted in St. Louis on September 14 a form for a non-negotiable bill of lading and urged its use by shippers.

THAT novelty manufacturers have not suffered from the slump that has affected most businesses during the past year and that an era of trade expansion has just opened for them, was asserted in reports of committees at the semi-annual meeting of the National Association of Advertising Novelty Manufacturers held in Chicago on September 15. Fifty firms throughout the United States were represented at the convention. It is estimated that the combined output of the manufacturers represented reaches an annual total of $40,000,000 of advertising, souvenir and premium goods.

A COMMERCIAL and industrial rebound is in progress which present prospects indicate will carry business to a normal level when the crop movement is in full swing. Increasing traffic is reflected in this week's railroad returns, which are accompanied by decreasing expenditures so far as operation and maintenance are concerned. Commercial failures last week in the United States, as reported by R. G. Dun & Co., were 206, against 244 the preceding week, and 189 the corresponding week last year. Failures in Canada numbered eighteen, against twenty-seven the preceding week and twenty-four last year. Of failures last week in the United States, 84 were in the East, 55 in the South, 52 in the West and 15 in the Pacific states, and 80 reported liabilities of $5,000 or more against 89 the week previous.

FOR the first month in eighteen the production of copper for the month of August showed an increase compared with the previous year. The output of copper in the United States, Canada and Mexico is estimated at 99,048,700 pounds, compared with 93,298,107 pounds in August, 1907, and 102,593,034 in 1906. The total production of copper in the United States, Canada and Mexico for the first eight months of this year, compared with two previous years, was as follows (in pounds):

	1908.	1907.	1906.
Total first seven months	560,046,284	662,523,133	685,765,551
August	99,048,700	93,298,107	102,593,034
Total, eight months	659,094,984	755,821,240	788,358,585

The above figures for eight months show a falling off compared with last year of 96,727,256 pounds, and compared with 1906 of 129,263,601 pounds.

Purchasing Power of Wages.

THE BULLETIN of the Bureau of Labor on wages and prices in 1907 shows an average increase of 3.7 per cent in wages per hour in the occupations and the branches of industry from which the returns were obtained, compared with 1906, and an increase of 4.2 per cent in the retail prices of the principal articles of food, weighed according to consumption in the families of workingmen. This indicates a slight decrease in the purchasing power of the wages earned. A comparison is made of the average hourly wages and the average cost of food in 1907 with the average of the ten years from 1890 to 1899 inclusive, showing an advance of 28.8 per cent above that average for wages, and 20.6 per cent for the price of food. It is shown that the variation in wages differed materially in different occupations, and the average may be misleading. The comparison is defective in other ways. The ten-year interval from 1890 to 1899 included a prolonged period of depression in which both wages and prices were unusually low, making the average for ten years a low one, while at the time the figures of 1907 were collected the level for both was unusually high. Another defect arises from making a comparison only of the prices of food and not of the whole cost of living, including rent, clothing, etc.

The value of the comparison, assuming it to be complete and accurate in any case, lies in bringing out the fact that the important thing for labor is not so much an increase in wages as an increase in the purchasing power of earnings and the steadiness of employment. Wages are a leading factor in determining the prices of articles produced, and those prices determine the real value of wages, which lies in their purchasing power, but the effect of an increase of wages does not appear so much in the prices of food, which comes largely from agricultural labor, as in those of other things affected by manufacturing cost. Moreover, the advance in wages reported is mainly in trades that are organized or unionized, and it often happens that there are not corresponding advances for other labor, while prices rise, and this will affect the real average.

As is well recognized, both wages and prices rise in times of industrial activity and business prosperity, and there is a continual striving in such a period to get higher wages because there is a demand for labor and to get higher prices because there is a demand for products, and this leads to an increase in the cost of production and the cost of living, until consumption is checked and a reaction sets in. The real difference

between a period of prosperity and one of depression is that of volume of production and equity of distribution. There is no particular advantage in high wages if prices are correspondingly high, so that what a day's wage will pay for is no more, but the important thing is that labor shall have employment and that it shall be efficient in production, so that there shall be plenty to distribute. A concealed factor that works toward trouble is the slackening of efficiency in labor as wages increase in prosperous times, so that there is progressively less produced at higher cost, until consumption has to diminish and put a check upon production.

Prosperity Predicted for 1909.

THE Commercial National Bank of Chicago in its eighth annual report on crops and general business conditions, predicts prosperity for 1909 and notes pronounced recovery from the business depression which followed the panic of last fall. The report is based upon the views of 4,000 bankers and business men in all sections of the United States.

After reviewing the unfavorable conditions which marked the final months of 1907 and the start of the present year, the statement dwells upon the improving credit and the activity in expansion in almost all lines of trade and industry.

"With the harvesting and movement of crops and the flow of money into the pockets of the farmers there must inevitably come general replenishment of stocks of merchandise," says the report. "The profits of the year are, or soon will be, in hand, and there will be a strong demand for articles of necessity and for luxuries unthought of except after the harvest home."

Continuing, the report says:

"The farmer has come into his own in the last ten years. For a long time the vast area of cheap lands open to settlement, and the rapid increase in farm acreage, held the remuneration of the farmer down to bare wages for unremitting toil. But in recent years the world's population has gained upon food production, the most available lands are occupied, and the new supplies are grown at higher cost. As a result, the farmer who is the fortunate possessor of land in the Mississippi valley, or any other rich and eligible location, now has a handsome margin of profit.

"This is true not only of the grower of food products, but of the producers of wool and cotton, and the advantage to the country is particularly noticeable in the case of the cotton grower because so large a share of that crop is sold abroad."

Serious discrepancies exist this year between the government's crop expectancy and the figures arrived at by the bank's correspondents in the grain states and those reached by the most authoritative private investigators. The report says:

"The government figures for August indicated a total wheat yield of nearly 672,000,000 bushels, against about 634,000,000 bushels last year. Our own percentages, using the government's figures for acreage, indicate a total crop of 648,000,000 bushels. Good opinion in the trade is that the bureau figures ignore loss by floods in Indiana, Texas, Kansas, Missouri and Oklahoma."

"On the basis of the crop reporting bureau's August 1 estimate the yield of corn indicated is 2,666,294,000 bushels, against 2,592,320,000 in the final estimate for 1907. Our own correspondents in the belt, basing their estimates on extensive inquiries, indicate a yield larger that 1907 by 1.2 per cent. This suggests a crop of 2,623,000,000 bushels.

"Reports from important areas show much conflict of opinion, but the best informed men in the merchant grain trade are coming to believe that the 1908 total will be little if any larger than the crop of 1907 under the best possible maturing conditions. Fortunately the danger incident to pollenization has been avoided. The danger now feared is that premature low temperatures may prevent normal maturing of the crop in the north central part of the belt. At this time the plant is making fine progress.

"Visible stocks of corn are extremely low and the amount of old grain in farmers' hands at the end of the crop year cannot but be much lower than usual. The price has ruled high in spite of business depression and reduced consumption during the first half of 1908; and it seems inevitable that prices will be fully sustained, if not advanced, with gradual revival of business activity."

That this year's cotton crop will measure fully up to expectations in the greater portion of the belt is foreshadowed by reports from widely scattered points. From Arkansas, Oklahoma and Texas come predictions of splendid crops. Neither the boll weevil nor tricks of the weather have done any material damage. One Texas estimate says that the state's production will reach the high total of 4,000,000 bales. In the Memphis district, which takes in western Tennessee and northern Mississippi fields, the same optimistic reports come.

With these encouraging reports of crop conditions prosperity in full measure is assured for the coming year.

Idle Cars Still Decrease.

THE latest fortnightly bulletin of the car efficiency committee of the American Railway Association covering the period ended September 10, shows a total of 222,632 idle cars in the United States and Canada, a decrease since August 19 of 30,371 such cars. This is the best and most encouraging record sent out since July 24, when a reduction of 36,720 cars was reported. In addition to this gain there was a decrease of 7,662 in number of bad order cars, so that the total number in use on September 10, over August 19 was 38,033. This reduction in the number of bad order cars is encouraging and shows that the railroads are extending the scope of their repair work.

The maximum number of idle cars was reported on April 29, when there was a surplus of 413,605 cars. The latest statement shows a total decrease since that date, therefore, of 190,973 or 46 per cent. The recovery has been continuous since May 13, except for the period ended July 22, when there was an addition of 5,129 cars to the idle list.

The bulletin calls special attention to the encouraging reduction of box cars not in use, largely due to the crop movement. Of the total 30,371 cars employed since the previous report, 21,723 were box and 7,662 coal and gondola cars. In several instances during the two weeks the committee's services were called upon to prevent car shortages.

The decrease was general throughout the United States, although there was a small increase in one section of the middle West. In Canada the number out of commission remained almost stationary, increasing about 50 cars over the number reported on August 19. In New York, New Jersey, Delaware, Maryland, and eastern Pennsylvania the reduction was nearly 5,000, and in Ohio, Indiana, Michigan and western Pennsylvania nearly 7,000. The district embracing Montana, Wyoming and Nebraska, which reported a small in-

crease in the previous statement, shared in the decrease reported on September 10.

RANDOM NOTES AND SKETCHES.

BY SIDNEY ARNOLD.

Arthur Lancaster, a contestant in the Olympian games recently held in London, England, accomplished something that had never before been even attempted since the world began. He swung an eight-pound blacksmith's hammer for twelve hours without a moment's rest. Lancaster was to have competed in a test of endurance against a Frenchman, but the latter did not keep his engagement, so the Englishman began his task alone. Never, it is said, has a feat of endurance been carried out under such depressing conditions. On a small stage in a darkened room, lighted only by footlights, a pale-faced man of 25, stripped to the waist and wearing flannel trousers and white boots, stood resting easily on the handle of a sledge hammer. Two other men were present as witnesses, and when at 9 a. m. the word to start was given, Lancaster swung his hammer round his head, and for 12 hours that eight pounds of metal continuously cleaved the air. No cheering strains from an orchestra assisted Lancaster; not even the tinkle of a piano helped to relieve the monotony. People dropped in by twos and threes, but the insufferable sameness soon drove them out again. Occasionally Lancaster's attendant would cause a welcome break by giving him a glass of milk —he drank eight during the 12 hours; or an inch-square egg sandwich—he consumed a dozen in all; or a few cold boiled green peas—he ate a handful during the day; or an oatmeal biscuit—he munched altogether 12 of these. But directly these interruptions were over Lancaster, who had continued swinging the hammer with one hand, would resume his double-handed swinging. Lancaster is considered to possess the strongest forearm and wrist of any man living. In the course of the twelve-hour exhibition the hammer which Lancaster swung traveled nearly 150 miles, it is estimated, and in the same time the Englishman lifted more than 150 tons, according to calculations. Such a feat as this is probably as much of a mental triumph as a physical, for any man who can swing an eight-pound hammer for twelve consecutive hours without having his brain be-muddled, must certainly be possessed of the right kind of gray matter, although it is perhaps difficult to see the sanity of such a test of physical endurance. I do not know whether Lancaster has achieved any great success with his brains but it would appear to me that he has the mental ability to make himself famous in some pursuit other than athletics.

* * *

The *Riverton* (Wyo.) *Republican* is credited with having the following to say of a short item clipped from a contemporary: "While perusing the *Dead Horse Gulch Bugle* of last week we notice the following item: 'Hank Snooks had a hog die on him last Tuesday.' We have never had a hog die on us, but can imagine what an awful sensation it would be." This reminds me that down in Danville, Pa., they are constructing a "sanitary" pigsty at the Danville State Hospital for the Insane, for which the Legislature recently appropriated $6,000. The sty will be warmed by steam, lighted by electricity, and the hogs will be fed on cooked food. The building, it is stated, will be of two stories, and the hogs will probably sleep upstairs. The sensation might not be quite so disagreeable to the editor of the *Riverton Republican* if one of these hogs were selected to "die on him." Besides, how much nicer the pork would taste coming from such a palatial sty!

* * *

An interesting relic was recently on exhibition in a hardware store window at Atlanta, Ga., I am informed. It was an old rusty saw with which the timber was cut for the first house built on Houston street, over sixty years ago. What would be the matter with putting it along with the brass warming pan that kept the Pilgrim Fathers from freezing in their beds?

* * *

A train representing the greatest amount of wealth ever carried by a single locomotive over any railroad in the United States and possibly in the world, recently made a trip to Kalamazoo, Mich., from Washington, D. C. It consisted of sixteen cars and carried 250,000,000 money orders, which in the aggregate amounted to $1,500,000,000. The average amount of each money order was about $7.50, and their combined weight 300 tons. This might have proved a tempting bait for some bold bandits between Washington and the destination of the train, but the fact that the money orders were all canceled put a different complexion on the situation. They were the accumulation of four years' business of the postoffices throughout the country. A Kalamazoo paper company had an arrangement with the government to take the canceled money orders to convert them into commercial paper.

* * *

Thus the poet of the New York *World* pays tribute to the golden month of September:

SEPTEMBER BALLAD.

The regal rose's blush has sped,
  The oyster reigns in stew and pie,
The shining apple now is red
  That was a dull green in July;
  Unmuzzled is the old kiyi
That gayly grins where once he wept,
  Which makes the pensive poet sigh,
This is the merry month of Sept.

Along the fading garden bed
  Drifts not a broidered butterfly;
The ice cream soda's up and fled—
  The price of coal will soon be high.
  The bathing suit is now laid by.
Which simply causes the adept
  In weather lore to dance and cry,
This is the merry month of Sept.

The "Panama" is almost shed.
  The buckwheat cake is waxing nigh.
The woodcock, to the bacon wed,
  Is gayly frizzling in the fry.
  The iceman isn't very spry—
'Neath sorrow's leaden ban he's kept;
  The chestnut's here—oh my, oh my!
This is the merry month of Sept.

ENVOI.

The summer girl so sweet and shy,
  Back into town again has swept.
And here's the wherefore and the why:
This is the merry month of Sept.

News Siftings

The Avondale Stove & Foundry Co., of Birmingham, Ala., has resumed operations again.

The plant of the McClary Mfg. Co., Montreal, Canada, stove manufacturers, suffered a $20,000 loss by fire on September 12.

In adtlition to their line of stove repairs the A. G. Brauer Supply Co., of St. Louis, Mo., will in future carry a line of furnace repairs.

J. A. Best & Co., of Allentown, Pa., have opened up a stove repair plant in that city under the name of the "Queen City Stove Repair House." They are now seeking catalogues and price lists of stove and range trimmings.

The Howard Stove & Mfg. Co. of Savannah, Mo., is building a plant in Omaha that will have 50,000 square feet of floor space, 30,000 of which will be concrete flooring. The combination of buildings will be 275x160 feet, and some of the buildings will be three stories high. The company, which has a capital of $150,000, expects to employ about 150 men as soon as operations are commenced.

The Union Mfg. Co. of Boyertown, Pa., which has been operating a foundry in that town for a number of years, has been incorporated with a capital stock of $50,000. L. S. Leiser, formerly of the Manufacturers' Foundry Co. of Sinking Springs, Pa., is now connected with the Boyertown concern in the capacity of general sales agent. The Union Mfg. Co. will in future manufacture Globe stoves and ranges.

The Central Association of Stove Manufacturers held a meeting at the Chittenden Hotel, Columbus, O., on September 15. There was a large attendance. The manufacturers present seemed considerably encouraged for the outlook for a good fall trade, and some of them are already beginning to realize that they could safely have made up larger stocks. Several new members have recently been added to the association.

Paxton & Gallagher Co. of Omaha, Neb., are the exclusive distributors for the West of the Monitor radiator, a base-burner with five front flues. The company states that this stove has 1,683 square inches more radiating surface than most base-burners now on the market. They say that the sales of the Monitor radiator are increasing every month, which fact is conclusive evidence that this well-known stove is coming more and more into popular favor. When writing Paxton & Gallagher Co., kindly mention THE AMERICAN ARTISAN.

The September issue of "Graphite," the monthly publication of the Joseph Dixon Crucible Co., Jersey City, N. J., is, as usual, full of interesting reading. It contains, among other things, articles on "What Teachers and Education Have Done"; "Prolonging the Life of Crucibles," by Dudley A. Johnson; "An Old-fashioned Spelling Bee"; "The Traveling Fraternity," by Sam Mayer, and the fifth installment of "Preventing Corrosion of Steam Machinery," by W. H. Wakeman. Mention is made of the election of Geo. T. Smith, vice-president of the Joseph Dixon Crucible Co., as a director of the National Association of Stationers and Manufacturers. On the back cover of "Graphite" is shown a picture of the German-American Fire Insurance Co.'s building, New York City, a structure of the flat-iron type, on the structural steel of which Dixon's silica-graphite paint was used.

The American Steel Range Corporation is the name by which the Stanford Steel Range Co. of Norfolk, Va., and formerly of Sheffield, Ala., will in future be known. The reorganization gives the new company a capital stock of $100,000. The foundry will be operated at Norfolk. The officers of the corporation are: President, G. T. Tillery, Norfolk; vice-president, G. T. Robinson, Sheffield, Ala.; secretary-treasurer, J. P. Jackson, Norfolk.

The Youngstown Furnace & Supply Co. of Youngstown, Ohio, is now remodeling, rebuilding and adding to the plant at Niles, Ohio, formerly operated by the Niles Mine and Mill Supply Co., which will be used by the company as a complete stove and furnace foundry and manufacturing plant. It will be remembered that the company recently took over the plant of the Elwood Stove Mfg. Co. of Elwood, Pa., and thus acquired a large quantity of completed stoves together with the patterns, machinery and equipment of the stove plant. These goods will be manufactured in the new plant at Niles, Ohio, as will also the company's line of furnaces. The shop at Niles is a large one. It is located near the crossing of the Pennsylvania and Baltimore & Ohio Railroads. The main building is 290x75 feet in extent to which there has been added a fine modern plating and polishing shop 60x30 feet. A foundry building now in process of construction will provide floorage for over 200 molders, and approximately 350 workmen will be employed about the plant. The old cupola will be torn out and a new melting equipment will be installed. The plant will be equipped with track, switches and all modern interior conveniences to properly care for the making and handling of the company's products.

CATALOGUE OF GEO. M. CLARK & COMPANY.

In the 1908-1909 catalogue of Geo. M. Clark & Company, Chicago, division of the American Stove Co., "Jewel" gas heaters and radiators are fully described and illustrated. The catalogue is known as No. 73, and it contains 32 pages, measuring 6x9 inches. The book is printed throughout in two colors on a good grade of enameled paper, the illustrations being of a high order and very clear as to detail. In their announcement, Geo. M. Clark & Company state that in offering their line of "Jewel" gas heating stoves they are confident that in variety and price they can meet every demand. They call special attention to their fire-place heaters and their coke burner. Mention is also made of the fact that their stoves can be adjusted for natural gas, gasoline gas, or machine gas. In the catalogue are shown illustrations of some of the advertising cuts which Geo. M. Clark & Company furnish free to their customers.

The No. 748 "Jewel" gas heater is a very attractive looking stove. The base, legs, top and grills are made

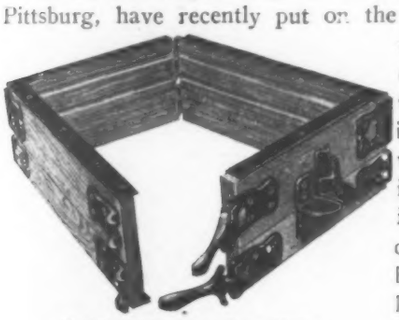
of cast-iron, and the tubes of smooth steel, the heater being provided with two cast-iron drilled burners. The cold air from the floor is heated in the cast-iron tubes at the back of and above the burners and rushed through all the tubes to the top of the stove. The heat from the burner surrounds these tubes until the pure air discharges in the room, then spends itself by radiation before its escape. The nickel ornaments of this heater reflect light and heat, contributing much to its appearance and work. Light shines forth through the mica from the glowing clay balls, circulation and ventilation being constant through the flue at the back of the stove.

The "Jewel" fire-place heater is provided with aluminum reflectors, the front and body of this heater being of sheet steel and having a dead black finish, very effective in contrast with the polished nickel ornaments. The gas connection is made through the oval hole beneath the valve wheel.

The "Jewel" coke burner is a full base-burner. When the direct draft damper is closed, heat passes down one side of the back and around under the ash-pan, then up the flue. It has a duplex grate, large ash-pan, poker-door and draft on the side. It is mounted on four substantial legs of adjustable length, and it may be used alongside any gas range of any height, or independently. Geo. M. Clark & Company will be pleased to forward their catalogue No. 73 to the trade. When writing for it kindly mention THE AMERICAN ARTISAN.

OBERMAYER'S MOLDING MACHINE SNAP FLASK.

The S. Obermayer Co., Cincinnati, Chicago and Pittsburg, have recently put on the market a new molding machine snap flask which, they say, is becoming very popular. It is made of 1⅛-inch kiln-dried cherry, grooved, has machine-locked corners, is bound at the top and bottom with iron bands securely screwed to the flask and has solid corners welded, thus insuring a perfectly rigid flask. The corner plates are made of extra heavy malleable iron, the hinges also being malleable with machine bearings the entire length of the flask. The hollow "V" shaped pin and guides insure close contact and permit the sand to drop between the pin and the flask. The snap used on this flask is simple, strong and efficient, and is made either in the hook or level type. When seeking further information concerning this flask from the S. Obermayer Co. kindly mention THE AMERICAN ARTISAN.



Molding Machine Snap Flask.

THE "PRINCESS" STEEL RANGE.

The body, top rim and swell base of the "Princess" steel range, made by the Allen Mfg. Co., Nashville, Tenn., are formed of a single piece of 18-gauge steel without joints of any kind, it is said. When there are no joints, the makers say there are no bolts to rust, no cement to fall out, and no cracks through which smoke and gases can escape into the room and cold air into the flue to spoil the draft and deaden the fire. Every part of the body of the "Princess" steel range has the strength of a solid unbroken sheet of steel, strongly secured by iron plates. The body is lined with heavy asbestos, held in place by cast-iron plates, securely bolted. The Allen Mfg. Co. says that when people know the good features of this range they will make their purchases where such ranges are sold. When writing the Allen Mfg. Co. kindly mention THE AMERICAN ARTISAN.

HOW THE BORN STEEL RANGE CO. HELPS DEALERS.

The Born Steel Range Co., Cleveland, O., announces the plans that they have adopted in aiding dealers to sell Born steel ranges. They supply dealers liberally with attractive printed matter; signs to put along the roads; signs for store fronts and windows; attractive and serviceable novelties such as match safes, and cuts and copy for local newspaper advertising. In addition to this they publish a monthly "News Letter," in which are enumerated their plans for boosting the sales of the Born steel range. The match safe that the company is distributing measures 3⅜ x 5 inches. It is a very attractive novelty lithographed in two colors, and is one of the most serviceable articles of this kind that could be distributed for advertising purposes. The Born Steel Range Co. has recently issued a catalogue descriptive of their complete line of steel ranges which they will be pleased to mail upon request. When writing for it, kindly mention THE AMERICAN ARTISAN.

"MATCHLESS" STEEL RANGES.

The Landay Steel Range Co., 2621 N. 15th street, St. Louis, Mo., say that their "Matchless" steel ranges are giving absolute satisfaction and that they are becoming more and more popular among dealers. These ranges, they say, are specially built to meet the demands of the masses for a substantial and durable range at a moderate price. The manufacturers say that they are having a very successful season with their No. 2500 "Matchless" range, which weighs 435 pounds. It is very attractive in appearance and is guaranteed to perform efficient service. The fire linings of all "Matchless" ranges are guaranteed by the Landay Steel Range Co. for three years. If they burn out within that time they will replace them. The company has recently issued a catalogue which they request dealers to send for. When writing for it, kindly mention THE AMERICAN ARTISAN.

Don't let a prospective customer take the aggressive in making a sale. Don't force him to get information from you with a chisel and mallet. When he opens up with his inquiries be on the alert and assume the aggressive. Many a customer is lost because the information that he wanted at the start had to be pried open with a crowbar.

The Hardware Record.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 38 to 43 inclusive.

A company will be organized at Gainesville, Tex., with a capital stock of $50,000, to manufacture sad irons. R. H. Dorsey is one of the promoters.

Moore Bros. Lightning Rod Co. of Graham, Mo., will move their plant from that town to Maryville, Mo., where a two-story building, 44x80 feet is being erected for them.

The United States Hardware Co., of Los Angeles, Cal., will be ready for business by the 1st of October. The company has a capital stock of $200,000, and will employ 150 men, it is said.

The Hurwood Mfg. Co. Bridgeport, Conn., makers of tubular lanterns and food choppers, has been succeeded by John A. Hurley, Inc. The officers of the company, however, remain the same as before.

The Salt Lake Wire & Iron Works of Salt Lake City, Utah, has been organized with a capital stock of $20,000, by Seth Brown, Walter J. Aldredge, Robt. L. Shepherd, Wm. P. Pratt and Wm. J. Tobey.

Chas. Swaine formerly a retail hardware dealer of Council Bluffs, Ia., is now manager of the Council Bluffs Sheet Metal Co. Mr. Swaine has disposed of his interests in the hardware firm of Swaine & Mauer.

The barb and fence wire factory of the Haish Mfg. Co., at DeKalb, Ill., was destroyed by fire on September 13. The loss is estimated at $200,000, partially covered by insurance. More than 100 men have been thrown out of employment as a result of the conflagration.

The McCaskey Register Co., of Alliance, O., recently gave their employes a picnic at a resort near Canton, O., about 1,000 people, employes of the company and their friends, attending the outing. A number of useful souvenirs were distributed by the company.

The American Iron & Wire Works Co. of Chicago is erecting a two-story addition to its already extensive plant. It will measure 75 x 94 feet. When the new building is completed the company will have increased facilities for manufacturing ornamental wire, brass and bronze work, etc.

The American Sales Co. of Chicago at its recent annual meeting elected the following officers: Frank O. Low, president; C. L. Hoff, vice-president; H. W. Seaman, treasurer; C. K. Anderson, secretary and general manager. The company is the distributor for the products of various wire cloth factories.

The Texas State Association of Master Sheet Metal Workers will meet at San Antonio, Texas on Oct. 2 and 3. Delegates from all over the state will attend the meeting, which promises to be one of exceptional interest to master sheet metal workers of the Lone Star state. L. H. Atwell is president and S A. Menczer, 713 E. Front St., Fort Worth, secretary of the association.

CATALOGUES FOR COUNTRY HARDWARE RETAILERS.

THE AMERICAN ARTISAN has of late been receiving a number of inquiries concerning the advisability of retail hardware dealers in country towns issuing catalogues, it having been suggested that under certain conditions the issuing of catalogues by country dealers might be a paying proposition. The subject is one that has created not a little interest among the trade in all sections of the country, and with a view of obtaining definite information as to what extent and with what success catalogues are being issued by country merchants, THE AMERICAN ARTISAN invites its readers to send in their views upon this important subject, so that publication may be given them. Any dealer who may have a copy of his catalogue to spare, would confer a favor upon THE AMERICAN ARTISAN by forwarding it, together with any information upon the subject that might prove of interest to the trade. Names and addresses will be withheld if so desired.

Spokane Hardware Co's. Catalogue.

The Spokane Hardware Co. of Spokane, Wash., recently issued an 88-page and cover catalogue, which they say was the means of increasing their business to an appreciable extent. The catalogue measured approximately 4½x7 inches and in it were listed with illustrations and prices kitchen necessities, such as meat choppers, cherry and raisin seeders, cookers, tea-pots, waffle-irons, griddles, kettles, sifters, dripping pans, sad irons, vegetable cutters, coffee mills, oil cans, canisters; wire goods, such as broilers and toasters, strainers, egg whips, corn poppers, letter baskets, wire dish-covers, etc.; granite ware, including coffee boilers, mixing bowls, tea kettles, ladles, pans of various descriptions, preserving kettles, wash-boilers, coal hods, etc.; kitchen cutlery; nickel-plated ware, including coffee percolators, chafing dishes, etc.; cast aluminum ware; silver ware; household utensils, including bells of various descriptions, ice cream freezers, carpet sweepers, cuspidors, mop wringers, dust pans, washing machines, etc.; gas and gasoline stoves; laundry goods, such as clothes wringers, wash boards and ironing boards; yard goods, including clothes pins, sickles, lawn mowers, buck saws, hammocks, garden hose, sprinklers; nails and carpenters' tools, hammers, planes, hatchets, braces, pinchers, chisels, screwdrivers, saws, levels, augers and bits, etc.; builders' hardware, various kinds of locks and latches, sash lifts, door bolts, hooks and staples, door plates; garden tools of various kinds; scales; animal traps; brushes of various descriptions; ready mixed paints; stoves and ranges; sporting goods.

At the top and bottom of each page of the catalogue the Spokane Hardware Co. had printed timely head-lines and foot-lines such as the following: "One to-day is worth two to-morrows"; "The sleeping fox catches no poultry"; "Be slow to choose a friend, slower to change"; "At twenty will reigns, at thirty wit, and at forty judgment." The Spokane Hardware Co. seem to be very well pleased with the results that attended the issuing of the catalogue just described.

AN ATTRACTIVE TOOL DISPLAY.

Honorable mention was made by the judges in THE AMERICAN ARTISAN'S hardware window display competition of the display gotten up by Mr. Chas. L. Wheeler for The Barkley, Bouton & Crain Hardware Co. of Ft. Collins, Colo. The photograph of the display was submitted by Mr. Wheeler under the name "Barbochco," a word made up of the initial letters of the name of Mr. Wheeler's company. The display was described by Mr. Wheeler as follows:

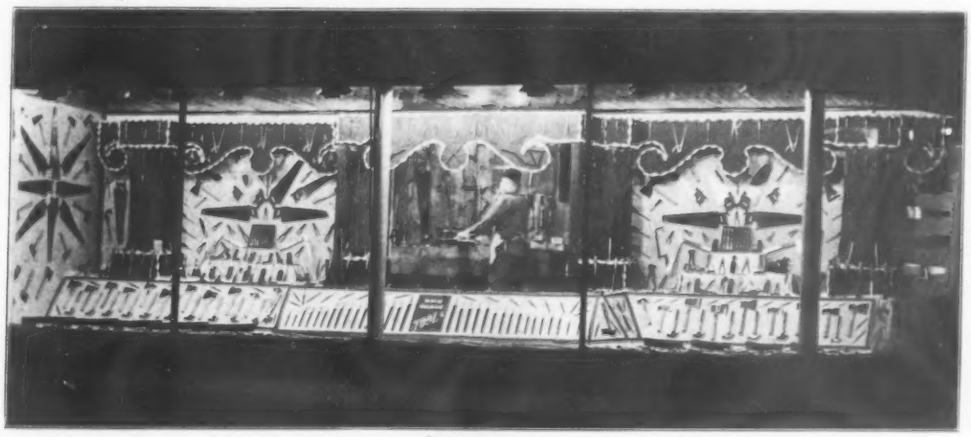
"This display entailed much work on account of the enormous size of the window, which was 33 feet long, 7 feet deep and 8 feet high. There were 861 tools of various kinds used in the display, and 160 yards of brass chain. Four days were required in its construction, including the building of the columns, cutting out the scrolls and constructing the mechanical carpenter.

"The beauty of the display can scarcely be realized from the photograph, for there was a very fine color effect obtained by the use of bright and handsomely painted tools.

"In the center of the display was a modern carpenter shop eight feet long and four feet deep, the back of which was boarded up, giving it a very natural appearance. Tools were scattered here and there on the bench partly concealed by saw dust and shavings, while some were hanging on nails on the wall above the bench. Standing at the bench, and sawing as if his life depended upon it, was a mechanical carpenter. With one hand he held a board in the miter box, while with the other he kept sawing from morning till night. The device was operated from a motor in the basement, and never ceased to attract attention. As will be observed in the photograph, the carpenter was very old, the object being to show that even an old man could do good work with such tools.

"On each side of the shop, the background was covered with white muslin, while the columns and scroll work were covered with purple cloth and edged with white. The platform upon which the columns stood, and the incline from the platform to the floor, were covered with white muslin and edged in purple.

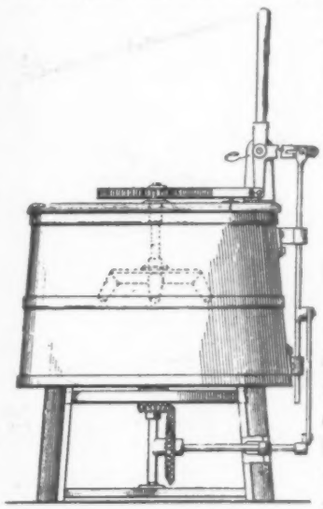
"One of the prettiest effects of the display was obtained by draping the columns and scroll work with brass chain. The display played its part well in drawing trade to the store."



Honorably Mentioned by the Judges in THE AMERICAN ARTISAN'S Window Display Competition—Submitted by Chas. L. Wheeler, with The Barkley, Bouton & Crain Hardware Co., Fort Collins, Colo.

GEARING FOR WASHING MACHINES.

Alexander F. Victor of the White Lily Mfg. Co., Davenport, Ia., was recently granted a patent on gearing for washing machines, Mr. Victor having assigned the patent to his company. In the mechanism for driving the machine are a vertically disposed rotary reciprocal shaft, a horizontally disposed rack indirectly operating the same, a vertically disposed lever pivotally connected to the outer end thereof for reciprocating the same, a vertically reciprocal bar, a fly-wheel, and means actuated by the bar for revolving the fly-wheel. The fly-wheel is horizontally disposed below the shaft, which is operated by a reciprocal device. A lever is connected to the operating device which actuates the vertical bar. Mr. Victor is manager of the eastern branch at Toledo, O., of the White Lily Mfg. Co., and his application for the patent was filed in April, 1907.



Washing Machine Gearing.

EN ROUTE TO MEMPHIS.

The following letter is being sent out by W. H. ("Pop") Bennett, 105 Lake street, Chicago, to those who contemplate attending the annual convention of the American Hardware Manufacturers' Association and the National Hardware Association, to be held at Memphis, Tenn., on November 18-20. Mr. Bennett, as will be observed from the letter, has charge of the transportation arrangements:

"At the last meeting of the American Hardware Manufacturers' Association, and the National Hardware Association, held at Atlantic City, I was appointed a committee of one on transportation, to complete arrangements for the next

meeting which is to be held at Memphis November 18th to 20th, inclusive, 1908.

"It is my intention to give the members the best possible service, and if sufficient number will warrant, we will run a special train from New York through to Memphis via Chicago, leaving New York via the New York Central Lines, on Saturday morning, November 15th, arriving at Chicago via Lake Shore & Michigan Southern Railway, on Monday morning, November 16th, and leaving Chicago via the Illinois Central Railroad, on Monday evening, November 16th, arriving at Memphis on Tuesday, November 17th.

"On arrival in Chicago the party will be met and entertained by a delegation of Chicago hardware dealers, who will show you the sights of the 'Windy City.'

"The special train will stop at any station between New York and Chicago for members who wish to join the party en route. Those from the west and northwest will join the party at Chicago.

"The question of rates is now being considered by the different passenger associations, and definite information as to the cost of this trip and exact schedule of the train will be given later.

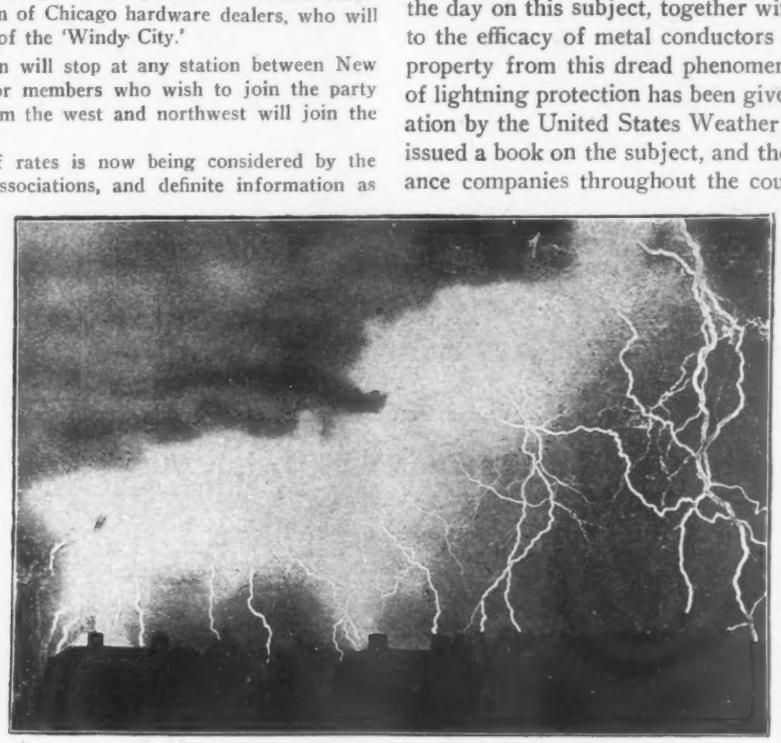
"It is my intention to personally conduct the party through to Memphis.

"Will you kindly advise me by return mail if you expect to attend this meeting, if so, what reservation is required in sleeping car. This information is essential in order to secure the necessary equipment from the Pullman Company."

Twenty-eight head of cattle electrocuted at Plainfield, Ill., by a bolt of lightning which traveled a barb wire fence against which the cattle drifted during the storm.

LIGHTNING, ITS CAUSES AND EFFECTS.

"Lightning, Its Causes and Effects," is the subject of a very interesting booklet issued by E. A. Foy & Co., Cincinnati, manufacturers of lightning rods and other apparatus, the object of the booklet being to place before those interested a clear and concise idea of the latest conclusions arrived at by the great scientists of the day on this subject, together with their opinions as to the efficacy of metal conductors as a protection for property from this dread phenomenon. The question of lightning protection has been given serious consideration by the United States Weather Bureau, which has issued a book on the subject, and the mutual fire insurance companies throughout the country have made it almost obligatory on the part of their policy holders to protect their buildings by means of lightning rods. This was done only after they had suffered great financial losses from lightning, and after it had been proved that properly erected conductors are absolute protection.



The Behavior of Lightning.

It is the opinion of the best-known authorities, says the booklet, that the destructive electrical discharges, which we call thunder-bolts, come from the earth through the objects upon its surface, which are thus destroyed. This proposition is regarded as an important one because showing to the candid reader that the lightning rod is an efficient method of protecting property on the earth's surface from the ravages of lightning. If the rod depended for its use upon its accidentally being in the right position to be struck by a bolt from the clouds, the chances of its saving the property would be small, but since the electricity in the clouds cannot be brought into a disruptive discharge without the corresponding amount of electricity in the earth beneath it, it is only necessary to give a good passage to the earth charge to combine with the cloud charge to render the combination harmless. Therefore a proper device, says the booklet, which will bring from the earth a constant flow of electricity to any considerable height in the air, will protect a certain area by making the disruptive charge impossible.

When the Union Pacific Railway built its line of telegraph poles across the "Great American Desert," the poles had three enemies: The Indians, who chopped them down for fire wood; the buffaloes, which found them convenient scratching agents for their shaggy hides, and the thunderbolts, which destroyed them by hundreds. Remedies were found for all three of these difficulties, says the booklet. The Indians were removed to their reservation; the buffaloes were exterminated by the hunters, and the lightning bolt was corrected by placing a rod or conductor upon every seventh pole. Since that time, it is said, an accident to the poles has been very rare.

E. A. Foy & Co. state that the value of lightning rods as property protectors is now generally realized. Their galvanized steel star section lightning rod is, they assert, a practical, efficient and moderate-priced lightning conductor, suitable for all buildings. It is constructed from a high grade quality of steel, made especially for this purpose, and galvanized with German spelter to prevent rust. E. A. Foy & Co. will be pleased to mail the booklet referred to to those inteested, together with another on the same subject, entitled, "The Reason Why." When writing them kindly mention THE AMERICAN ARTISAN.

THE PRITCHARD-STRONG CO. HAVE A NEW PROPOSITION.

The Pritchard-Strong Company, Rochester, N. Y., manufacturers of "Prisco" metalware, are sending out a circular letter in which they state that they have been obliged to discontinue the "Brother Bill" prize contest in which they had planned to give away $500 in cash prizes to dealers who would show their skill in getting up window displays featuring "Prisco" metalware, owing to the plan being declared a violation of the lottery act. The company states that their "Uncle Obediah" prize contest was conducted last year with the sanction of the Postoffice Department, but that this year the "Brother Bill" contest, conducted along similar lines, was declared to be a lottery. In the letter that they are sending out they ask for photographs of novel window displays of "Brother Bill" and "Prisco" metalware, and state that they will gladly buy photographs of window displays in which these well-known brands of metalware are featured. The Pritchard-Strong Co. states that they have planned an entirely new proposition to supply the demand for something that hundreds of dealers have repeatedly asked for. A postal card will bring the information desired. When writing The Pritchard-Strong Co., kindly mention THE AMERICAN ARTISAN.

RETAIL HARDWARE DOINGS.

NEW FIRMS AND INCORPORATIONS.

Rich Hill, Mo.—Prowell & Smith have engaged in the hardware business.

Hastings, Neb.—L. H. Convera & Co. have engaged in the hardware business.

Victoria, Tex.—W. H. Smith, J. J. Welder, Jr., R. H. Welder and others have organized a company which will be incorporated to engage in the hardware business.

Taylor, Tex.—The Hoch Hardware Company has been incorporated with a capital stock of $50,000.

Menominee, Wis.—Publitz & Jenson have opened a hardware store and tin shop.

Donaldson, Minn.—Elmer Ellington has opened a hardware store in the Hulbert building.

Opelika, Ala.—Claude R. Summers has opened a hardware store on South Eighth street.

Milan, Mo.—The Harris Hardware Company has been organized with Ed J. Harris as general manager.

BUSINESS CHANGES.

Holmesville, Neb.—L. D. Gray has sold his hardware business to Heaston Bros.

Luray, Kan.—John A. Dick has purchased the hardware stock of Else & Hoover.

Rosalia, Wash.—J. Frank Anderson has purchased the interest of L. W. Anderson in the hardware and stove firm of D. F. Anderson & Sons.

Sycamore, Ill.—Brown & Stone have purchased the hardware stock of Wm. Haish & Co.

Wyoming, Ia.—Hogan Bros. & Co. have purchased the hardware stock of W. S. Johnson.

Starke, Fla.—DeWitt C. Jones purchased a half interest in the hardware and furniture business of G. C. Livingston, and in the future the firm will be known as G. C. Livingston & Co.

Brandon, Ia.—Jason Winsor and Leon Davis have purchased the hardware store of J. E. Haines.

Newton, Ia.—Ernest L. Earley has sold his interest in the Earley & Marshall hardware business to Lory E. Johnston.

Adair, Ia.—E. Freese has disposed of his hardware business.

MISCELLANEOUS.

Bay City, Mich.—Goddyne & Schindler are erecting a new two-story brick building, 45x100 feet.

Columbus, Miss.—The warehouse of the Hill Hardware Company was destroyed by fire.

Fargo, N. D.—The Western Hardware Company has been awarded the hardware contract for the new Gardner Hotel.

Seattle, Wash.—The hardware store of F. J. Doyle was burglarized.

Rawhide, Nev.—The Collins hardware store was destroyed by fire.

Ellensburg, Wash.—The hardware store of the William Smithson Company was burglarized.

Oelwein, Ia.—The store of the Feltus Hardware Company was burglarized.

Youngstown, O.—Dingledy's hardware store was burglarized.

Fort Scott, Kas.—The Davis Hardware Company has been reorganized under the name of the Armstrong-Davis Hardware Company.

Pukwana, S. D.—F. E. Weiss is erecting an addition to his hardware store.

Advertising Department

Our readers are invited to send in copies of their advertisements in the local press for criticism. All communications should be addressed to the "Advertising Department" of THE AMERICAN ARTISAN.

The advertisement of the Rechlin Hardware Co. of Bay City, Mich., while possessing some good features, is not without its faults. The type selections are entirely satisfactory and the display feature has been well taken care of, but the ad presents altogether too crowded an appearance to be attractive. Far better would it have been had the Rechlin Hardware Co. used a small cut of their 98-cent tea kettle, one of their 49-cent dishpan, and one of their $2.69 wash boiler, instead of filling up so much space with an ornament that instead of being ornamental detracts from the appearance of the ad. Too much space is frequently wasted in advertisements by the use of meaningless and unsightly ornaments. An ornament never embellishes an ad when it takes up space that should be occupied by something else more important. In the lower left-hand corner of the ad the word "everything" is incorrectly spelled, and the advertisers unfortunately did not deem it necessary to say on what street and in what town they do business. The text of the advertisement, however, is very well written and could scarcely be improved on. The ad appeared in the *Bay City* (Mich.) *Tribune* of September 3 and took up 7¾ inches of space, five columns wide.

* * *

A very excellent advertisement is that of Ford's Hardware of Dodgeville, Wis., in which sporting goods are advertised. The matter is well laid out and the type is of a uniform style and clean, rendering the ad exceptionally attractive. It is rarely that such a clean-cut country newspaper advertisement as this has been brought to our attention. The display feature is a strong one and could scarcely be improved upon. A plain unbroken black border, however, would have looked much better than the ungainly one that has been used. A border as a rule does not add to the appearance of an advertisement unless it is of such a style as to give prominence to the ad. The prices quoted on shotguns and rifles might have been printed in a somewhat bolder face type than that used, and the advertisers should have mentioned their location in Dodgeville. By not doing this they have overlooked a very important feature of country town advertising. Farmers and others from the surrounding country frequently purchase sporting goods as well as the town folk, and it is almost certain that many of the former may not know where Ford's hardware store is located. Notwithstanding these shortcomings, the ad is a strong one and is well worthy of study. It appeared in the

Dodgeville (Wis.) *Chronicle* of August 28 and occupied 8 inches of space, four columns wide.

* * *

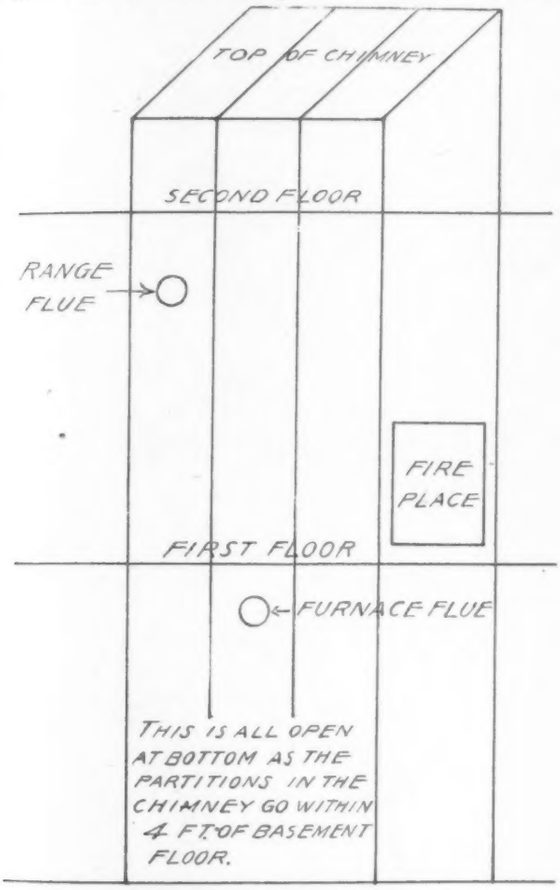
Don't forget that your show window is your best salesman. It is the only means passers-by have of judging your store.

Heating and Ventilating

SAYS "UNCLE CHARLIE" IS WRONG.

To THE AMERICAN ARTISAN:

In THE AMERICAN ARTISAN of August 15, J. P. Howey & Son of Bryan, O., submitted a drawing of a chimney with notations on it indicating the way that it had been built. (The drawing is shown herewith.) The chimney in question has three flues, and the partitions in the center do not go to the bottom within four feet. Each flue has one pipe opening, one for the range, one for the furnace and one for the grate, but they all open out at the bottom into one clean-out. Messrs. Howey & Son wanted to know



Drawing of Chimney.

whether the furnace flue would work satisfactorily or not.

In your issue of August 22, "Uncle Charlie" says that the furnace flue will work. To this I take exception, and say that it will *not* work, and I have had several such cases. The center or furnace flue being the warmest, and with no fire usually in the fire place, the furnace flue would have the greater draft, and would draw air from the other flues, thus checking the draft of the furnace, as "Uncle Charlie" says. Does he want the draft checked at all times? My experience is that there are times every day when the furnace needs all the draft that the flue can furnish without any check from any source. I know of several cases of this kind, and before the furnace would work properly the other flues had to be cut off from the furnace flue. To be sure that I was right I submitted this case to two expert furnace men, and they said it would *not* work, which backed my own experience in these cases. I would advise Howey & Son to have the furnace flue cut off from the others, in order to save themselves trouble from the furnace not having sufficient draft.

FURNACE MAN.

Chicago, Sept. 11, 1908.

ANOTHER OPINION.

To THE AMERICAN ARTISAN:

Regarding the furnace flue problem of J. P. Howey & Son of Bryan, O., I would say that no stove or furnace will have a steady draft when a double or triple flue as shown by them opens into one clean-out at the bottom. It will be necessary for them to extend the partitions downward and make the flues independent; otherwise one flue may check the draft of the other.

AUGUST SCHWIEN, August Schwien Stove Co.

St. Joseph, Mo., Sept. 12, 1908.

A PROBLEM IN WARM AIR FURNACE HEATING

To THE AMERICAN ARTISAN:

As a reader of THE AMERICAN ARTISAN could you please tell me how to get at the heating capacity of a hot-air furnace when the diameter of the fire-pot 24 inches, the diameter of the casing 40 inches, and the diameter of the smoke-flue 8 inches, are given.

To make the case plain. Some years ago a portable furnace was installed by a heating firm in one of the principal residences in this city, and the furnace gave good satisfaction up to a year ago. Four large rooms were added to the building. The architect gave the owner the assurance that the original furnace was of sufficient capacity to heat the new addition, and accordingly four pipes were taken and run to the four additional rooms. The building has at present 19,359 cubic feet of space. The firm that supplied the furnace for the house did not rate their furnaces in their catalogue, but simply stated that a furnace of their manufacture with a 40-inch casing would heat seven rooms 14 x 14 x 10, under ordinary conditions. Now seven rooms 14 x 14 x 10 would contain 13,720 cubic feet of space, and so I take it for granted that the present furnace is not large enough to heat the house with its additional four rooms. I did not install the heater when the building was first constructed, neither did I make the connections when the new addition was built, but I am called upon by the owner to remedy the trouble if possible. I am planning to put a small heater under the new addition and let the old heater heat the original building as before. I trust that some reader of THE AMERICAN ARTISAN may be able to help me out in this matter.

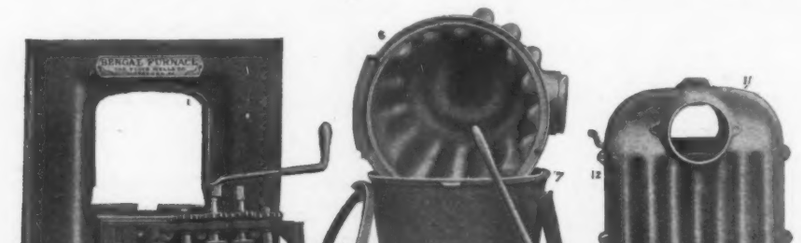
J. C. MOEBUS.

811 E. Front street, Butte, Mont., Sept. 14, 1908.

THE BENGAL FURNACE.

The Bengal furnace, manufactured by The Floyd-Wells Co., Royersford, Pa., and 83 Kinzie street, Chicago, is said by the makers to be one of the most powerful and compact furnaces ever produced. This furnace burns anthracite or bituminous coal or coke. It

has a solid cast front and deep ash-pit, and is provided with either draw center anti-clinker grate or triplex grate, which can be drawn out through the ash-pit. The Bengal furnace has a clinker or poke door to clean the fire, and has a check-lift in both the ash-pit door and the feed-door to regulate the fire from upstairs. The deep corrugations in the dome and radiator, as shown in the accompanying illustration, are said to be the great heat producing feature in this furnace. Another distinctive characteristic of this furnace is that when the feed door is open to check the fire it still keeps heating. The oxygen supply duct takes the air in under the fire door, conducts it around the top of the fire-pot and discharges it at the back thoroughly heated, insuring a good hot blast and producing thorough combustion, it is said. The hot products of combustion in the Bengal furnace pass down the front section of the radiator, and up the back section before passing out of the pipe to the chimney.



View of Parts of Bengal Furnace.

The Floyd-Wells Co. says that the Bengal furnace "does the work, saves fuel, satisfies the customer, heats the house and *not* the chimney." When writing the company for further particulars regarding this furnace kindly mention THE AMERICAN ARTISAN.

INSIDE CIRCULATION IN WARM AIR FURNACE HEATING.

BY CHARLES S. PRIZER, PRESIDENT OF THE FEDERAL FURNACE LEAGUE.

In the following article Chas. S. Prizer replies to the criticisms of W. J. Heald of the Lennox Furnace Co., Marshalltown, Ia., whose paper, which was read at a meeting of the Midland Club held in Chicago on August 1, was published in THE AMERICAN ARTISAN of September 12. Mr. Prizer, who is vice-president of the Abram Cox Stove Co. of Philadelphia, believes that the matter which Mr. Heald brought out in his paper will be of especial interest to furnace dealers of the West. Mr. Prizer's reply follows:

I have been much interested in the paper read by Mr. Heald at a recent meeting of the Midland Club, wherein he criticizes my views regarding ventilation as a feature of warm air furnace heating.

Mr. Heald's essay is another evidence of the increasing interest which is being manifested among manufacturers and the trade concerning the problems of warm air furnace heating. The more discussion we have regarding different methods and systems of furnace installation, the better will the merits and advantages of furnace heating be understood and appreciated. While Mr. Heald seems to criticize my views regarding ventilation rather severely, I believe that an analysis and a comparison of his position and my own will show that there is but little real difference between us concerning this vital feature of furnace heating. I will attempt to meet Mr. Heald's objections to the policy of the Federal Furnace League and to my views on ventilation and circulation:

POSITION OF THE LEAGUE.

There is room in the Federal Furnace League for all who are working for the improvement and advancement of the warm air furnace system.

The League encourages and applauds every effort to uplift the furnace business and to diminish the evils resulting from faulty installation; and it fully recognizes the fact that in many cases it is not possible to persuade house owners to make the changes in old houses which would be required to permit the installation of the ideal warm air heating and ventilating plant.

This is no reason, however, why the ideal method should not be explained and upheld and advocated. The laws of heating and ventilating are not abrogated because the owner of an old house declines to spend the money necessary to adapt the building to a perfect system of heating and ventilating.

PURPOSES OF THE HANDBOOK.

Mr. Heald expresses a fear that the Handbook about to be issued by the League will reflect the views of eastern furnace manufacturers, will not meet the needs of western furnace manufacturers, and particularly will advocate a system of ventilation, which, while "unquestionably first class," is not practicable for application to old houses.

These fears are without foundation. The Handbook will be a practical, serviceable treatise and will fully explain the different methods of furnace installation as practiced successfully in the various sections of the country.

It will explain and advocate the ideal method of heating and ventilating, but it will not condemn reasonable and practical compromises which do not go to the extreme of destroying the valid claims of superiority for the warm air furnace method.

Every furnace manufacturer in the United States has been invited to furnish the League with suggestions as to methods of furnace installation and a surprisingly large proportion of the total number have responded to the invitation. On vital points and features there has been shown but little real divergence of opinion among the furnace manufacturers who have favored the committee with suggestions.

The Handbook will be broad and comprehensive in its scope and in the methods it will advocate, but its rules will be definite, simple and easy to apply. I am convinced that Mr. Heald and the other western furnace manufacturers will serve their interests far more fully by working in and through the Federal Furnace League than they will by attempting to form a separate organization simply because they imagine that some hobby of installation to which they pin their faith is not zealously supported in certain other quarters.

The membership of the Federal Furnace League now includes a large proportion of the total production of the country; it *should* include every manufacturer of furnaces in the United States.

MR. HEALD IN ERROR.

Mr. Heald is absolutely mistaken in attributing to me the statement that "under no circumstances should return air be used in furnace heating." In the very paper to which he refers I advocate taking cold air from the dining room and hall of the house and returning it to the furnace as a compromise where a ventilating shaft cannot be secured.

In a furnace handbook which I wrote two years ago, I explained how a part of the cold air supply (not exceeding one-half) may be brought down from the hall and dining room of the house to the furnace.

VENTILATION.

I will not, however, advocate or condone a system where

by the entire supply of air for the furnace is brought down from the rooms of the house, thereby providing a system of complete inside circulation, for this is a vicious and indefensible perversion of the fundamental principles of healthful ventilation. I take issue with Mr. Heald when he states that in the house as ordinarily built, the air that finds its way in through crevices and through the occasional opening of doors will furnish sufficient ventilation for the occupants. According to this doctrine, houses heated by direct radiation will be sufficiently ventilated, and this, we well know, is not the case.

Every room in a house should be ventilated in winter without opening windows or doors for the admission of outside air. If a house is sufficiently heated by a warm air furnace plant which takes its supply of cold air from the outside (or largely from the outside), then this ventilation will be accomplished even if there is no formal provision for ventilation; and hundreds of thousands of houses are today thus sufficiently and adequately heated with warm air furnaces.

No house will be healthfully heated if the entire supply of air for the furnace is taken from inside the house.

I advocate formal ventilation in connection with furnace heating because such ventilation assists in distributing the heat to every room and relieves the pressure against which the ordinary furnace plant, that does not take its supply from inside the house, must work.

Mr. Heald says that the air to supply the furnace, under a system of inside circulation, blows into the house, is carried down to the furnace, is heated, and is then circulated back to the rooms, thus providing ample ventilation. But if this is true then an equally large volume of air must blow out of the house again through cracks, crevices, etc., as two volumes of air cannot occupy the same space at the same time.

Then, too, Mr. Heald's argument for what he euphemistically terms "ventilation," would have absolutely no application to a tightly constructed house. His plan would be absolutely indefensible unless the house is so loosely built that the wind can freely whistle through it, and it is practically impossible to heat such a house at all.

While it is desirable that every room in a house be properly ventilated, yet the ventilation of sleeping chambers is of the most supreme importance. An abundant supply of fresh air should be furnished to all sleeping rooms, not only because of the necessity for sanitary conditions for the members of the family during the night, but what is even more important, to fit these rooms for the occupancy of those who are sick.

In sickness there is nothing more vitally necessary than pure air.

How would Mr. Heald's so-called system of ventilation provide for renewing the air in the closed chamber of the member of the family who is stricken with sickness?

Under his complete system of returning the air to the furnace he would convey the air from that sick room to the furnace whence it would be distributed throughout the other rooms of the house.

It is impossible to properly ventilate a house without changing and renewing the air in it.

HINTS FOR THE FURNACE DEALER.

The Federal Furnace League does not ask those who install furnaces to attempt impossibilities, but it does urge them, in their own interest, to do everything possible under existing conditions to elevate and improve the standard of practice in furnace installation. The practical furnace dealer will take contracts for installing furnaces in many cases where it is impossible for him to secure such conditions and such house construction as will enable him to put in the pertect furnace plant; but he should always strive to secure the best possible conditions under existing circumstances and he should exert his influence in his community to induce architects, builders, contractors and owners to make the provisions tor a first-class warm air furnace heating and ventilating system a primary feature in the houses they design and build.

NOT A SECTIONAL ORGANIZATION.

May I venture to remind Mr. Heald that the Federal Furnace League is in no sense a sectional organization Its membership is drawn from every section of the country where furnace manufacturers are located and the output of its members is sold in every town and village where heating apparatus finds a market.

The laws and principles of heating in the east and in the west are identical and the interest of furnace manufacturers throughout the whole country are mutual and not antagonistic.

Let us all work together to improve the heating and ventilating of the homes of the people.

PARAGRAPHS.

The Twentieth Century Heating & Ventilating Co. of Akron, O., manufacturers of the well-known Twentieth Century furnaces, report that their plant is now running on full time and that the outlook for a good fall's business is very favorable.

The Interstate Mfg. Co., Oskaloosa, Ia., say that there is a steadily increasing demand for their "Better" furnaces, which are known to possess large, powerful heating surfaces. Their 800 series "Marvel" furnace is provided with a two-piece cast-iron pot, a large feed door, and with a flat dumping and shaking grate or "Marvel" triangular bar grate. The Interstate Mfg. Co. has some good literature for distribution descriptive of their line of "Better" furnaces, which will be forwarded to the trade upon request. When writing for it kindly mention THE AMERICAN ARTISAN.

The Boynton Furnace Co., New York and Chicago, are sending out a very attractive hanger card lithographed in several colors, depicting an old furnace man sitting on the edge of the Boynton patented square fire-pot, and telling of the merits of Boynton furnaces in the following language: "Now listen to me! I've been around furnaces close on to thirty years. The Boynton patented square pot solves the furnace problem. No question about it." The card measures 12½x25 inches. When writing the Boynton Furnace Co. kindly mention THE AMERICAN ARTISAN.

F. Meyer & Bro. Co., Peoria, Ill., say that there is a steadily increasing demand for their nested cold air pipe, which can be quickly and easily put together at the job without the use of tools or stakes, the edges being locked by simply putting them together. The makers say that there is absolutely no chance of telescoping when the three notches in the pipe are turned over the seam. F. Meyer & Bro. Co. state that a large amount of their nested pipe can be put into one small crate, in which condition the freight rate is of the lowest class. When writing for further particulars concerning this pipe kindly mention THE AMERICAN ARTISAN.

The Fox Furnace Co., Elyria, O., say that the maximum amount of combustion is obtained in their 2500 series Fox furnaces. This furnace is mounted out of 10 gauge steel in the radiator, 8 gauge steel being used in constructing the ash-pit. The feed chute extends through the casing getting rid of the joint at the casing line that is often said to cause trouble. The Fox Furnace Co. states that with their big plant in the center of the iron district they are in a position to turn out a first-class furnace at a very moderate price. The company will be pleased to forward their catalogue to the trade. When writing for it kindly mention THE AMERICAN ARTISAN.

Schwab's side wall registers, manufactured by R. J. Schwab & Sons Co., Milwaukee, Wis., are said by the makers to be a factor in the modern method of heating a room, and to be a great improvement upon the old-fashioned floor registers. They are said to be noiseless in operation, very substantial in construction, and neat in design. R. J. Schwab & Sons Co. say that in their Gilt Edge Radium furnace every particle of fuel is utilized, rendering it extremely economical. All of the company's extensive line of furnaces are said to be of recognized merit and trade winners. Their catalogue may be had for the asking. When writing for it kindly mention THE AMERICAN ARTISAN.

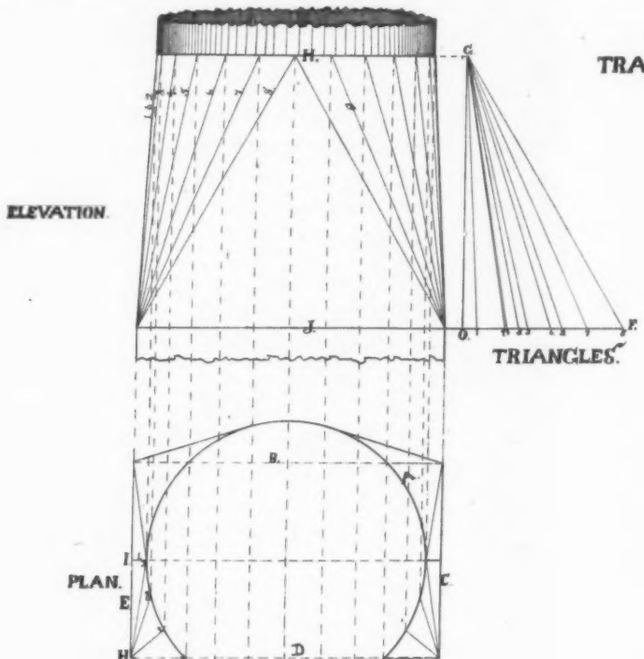
Tinshop

TRANSFORMER OR SQUARE TO ROUND, BY TRIANGULATION—NO. 1.

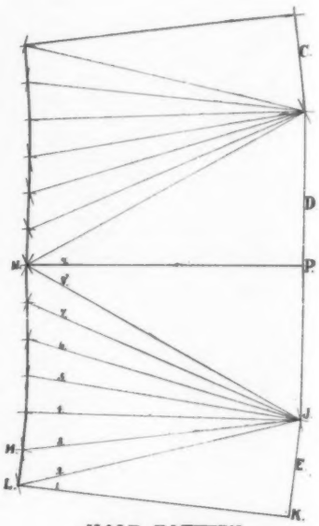
BY G. L. GRAY.

For this problem the elevation is required merely to show the height. A problem where the top and bottom lines H and J are parallel with each other, does not require an elevation, and you can establish the height to suit the occasion. All that is really required is a quarter plan to get the pattern for this transformer.

First draw circle A of plan of the desired size, also square end B C D E; space quarter-circle into any convenient number of equal parts; in this case six spaces are used. Draw lines from all spaces to corner H, numbering each line as shown 1 to 9; draw line O G the height of elevation, and at right angles to line O G



TRANSFORMER. #1.



draw line O F indefinitely for base of triangle; next take the length of each numbered line in plan from 1 to 9, and place it on base line O F; draw the lines from each point on base line to G, and number each line the same as in plan; the lines just drawn from G to points on base line are the true lengths of each angle.

To make pattern take the true length of line and place it as shown in pattern by L K; next take the distance I E of plan, place compasses at K and strike arc at J. Next take true length of line 2 from triangles using L as center; strike arc at J, which is same as point H of plan; take true length of line 3 in triangles, using J as center; strike arc at M; take the distance of space on circle A, using L as center; strike arc intersecting at M and take true lengths of remaining lines in their proper order, and continue the same as for lines 1 and 2 until line 9 is reached. Take the true length of line 9, using N as center; strike arc at P; take half the distance of line D in plan, using J as center; strike arc at P, which is quarter-pattern. The other four corners are the same as the one just explained.

STATE FAIR EXHIBIT OF THE W. J. BURTON COMPANY.

The W. J. Burton Company, Detroit, Mich., had a very interesting exhibit at the Michigan State Fair, held in Detroit on September 4-11. It consisted of their own make of roofing, steel ceilings, gutters and conductor pipe, weather vanes, etc. The booth in which the exhibit was given was made entirely of the goods of the company's manufacture and showed the many uses of their products.

During the fair the company inaugurated a "Farmer's Guessing Contest," as follows: First prize, horse weather vane, to the one guessing the nearest correct number of square feet in "Eastlake" metal shingles for roofing, manufactured and sold by the company from September 11, 1907, to September 11, 1908; second prize, rooster weather vane, to the one guessing nearest the number of lineal feet of gutter and conductor pipe and ridge roll the company had manufactured and sold in the same length of time; third prize, eagle weather vane, to the one guessing nearest the number of square feet of asphalt smooth finished and gravel finished roofing sold by them during the same period.

The prizes were all made of metal and finished in gold. Coupons issued at the exhibit explained fully the manner in which the prizes were awarded. The W. J. Burton Company last year was awarded a first prize diploma for their exhibit at the state fair.

THE CORTRIGHT METAL SHINGLE ADVOCATE.

The recent issue of the Cortright Metal Shingle Advocate, published by the Cortright Metal Roofing Co., Philadelphia and Chicago, contains some very interesting reading, and a lot of information about the good qualities of Cortright metal roofing and shingles. On pages 4 and 5 of the booklet is shown a picture of

the railway depot at Durham, N. C., which is covered with Cortright metal slates. The Cortright Metal Roofing Co. states that these goods are now being used by some of the largest railroads in the country. It is pointed out that a Cortright roof is unaffected by the constant vibration caused by moving trains, which is apt to loosen and destroy stone slate or earthen tile. Speaking of metal roofing, the Cortright Metal Roofing Co. says in the Advocate:

"Please keep in mind that we do not make '57 varieties.' We find it very difficult to make one thing very well. Watching all things—from raw material to the finished point—so that there may be no fault or flaw in Cortright Metal Roofing—is a man's job. Maintaining the harmony keeps us too busy to improvise variations."

CATALOGUE OF THE ELLER MFG. CO.

The Eller Mfg. Co., Canton O., manufacturers of metal ceilings, cornice, skylights, eaves trough, conductor pipe and the well-known "Champion" metal shingles, have just issued their catalogue No. 17, describing their stamped metal ceilings. The catalogue measures 12x9 inches, contains 138 pages printed on high-grade enameled paper, and possesses numerous well printed illustrations of the company's selected, classified designs of stamped steel ceilings. In these ceilings, the manufacturers say, the modeler's skill has not only been directed to produce patterns which would please the eye, but to harmonize the classical arts and make lasting beauty. The ceilings listed in the catalogue are of the following designs: Greek, Oriental, Romanesque, Gothic, Italian Renaissance, Rococo, Empire, Colonial, Louis XIV, Stucco, and other miscellaneous designs. A very complete line of center pieces is also illustrated and described in the catalogue. The Eller Mfg. Co. states that with their stamped steel ceilings the cost of erection has been reduced to a minimum, as all their ceilings possess close-fitting joints. The catalogue is an excellent specimen of the printer's art, and those interested in metal ceilings will find it a useful book to have at hand. It will be forwarded on request. When writing for it kindly mention THE AMERICAN ARTISAN.

CATALOGUE OF BERGER BROS. CO.

Berger Bros. Co., 237 Arch St., Philadelphia, manufacturers of tinners' and roofers' supplies, have just issued their 1908 catalogue, which is a book of 160 pages, measuring 5¾x8¾ inches. The catalogue is profusely illustrated and contains a list of the very extensive line of sheet metal products, etc., manufactured and handled by the company. Among the articles that are listed and described may be mentioned: Tin and terne plates, eave gutter and pipe, gutter and pipe hangers, pipe hooks and fasteners, steel roofing and siding, V crimp and corrugated roofing, genuine Russia and American planished iron, B. B. galvanized and black iron, sheet zinc, sheet copper, sheet lead, metal lath, rivets, bolts, solder, registers, ventilators, hoods, elbows, ears, handles, valves and plungers, tinners' machines and tools, malleable and gray iron castings, etc. Berger Bros. Co.'s slip joint gutter is easy to put together, is said to require no soldering, and not to be affected by expansion or contraction. The company's galvanized steel gutters are made from the best grade of galvanized steel sheets, and their charcoal iron roofing plates are made from genuine knobbled pure charcoal iron blooms. The latter are made in three grades, with 40-pound, 25-pound and 14-pound coating, respectively. The company's V crimp roofing is said to be the simplest style and cheapest form of any metal roof now on the market. This roof is recommended to those wishing a good cheap and durable covering for barns, warehouses, saw mills, sheds, etc. Berger's patent pipe fastener can be used on all kinds and sizes of pipes, and used either end up, right or left hand, or in any other position desired, allowing enough variation to let the pipe slip together until it is tight in the joints. It is said to need no close measuring on the wall to find a joint for the drive, and it combines a handy, solid, concealed fastener in every respect. Owing to the racks being long, with clips at each end to solder, the strain is lessened and they are not liable to become loose. Berger's hinged hangers, for open, clear expanding gutter, are handy ornamental and durable. They are made to suit any pitch every one-eighth inch. The catalogue is a very complete one in every respect. It may be had for the asking. When writing for it kindly mention THE AMERICAN ARTISAN.

NOTES AND QUERIES.

"DEPENDABLE" AND "VERY BEST" SEWING MACHINES.

FROM WIMBERLY & THOMAS HARDWARE CO., BIRMINGHAM, ALA.

Who makes the "Dependable" and "Very Best" sewing machines?

Ans.—National Sewing Machine Co., Belvidere, Ill.

ADDRESS OF DIGHTON FURNACE CO.

FROM THE WILLIAM T. DUST CO., 32 MACOMB ST., DETROIT, MICH.

Where is the Dighton Furnace Co. located?

Ans.—North Dighton, Mass.

ADDRESS OF POWERS REGULATOR CO.

FROM C. DEWITT WAGNER, CEDAR RAPIDS, IA.

Where is the Powers Regulator Co. located?

Ans.—40 Dearborn street, Chicago.

POP-CORN WAGONS AND PEANUT ROASTERS.

FROM DRIGGS & JONES, CLINTON, MO.

Where can we get pop-corn wagons and peanut roasters?

Ans.—C. Cretors & Co., 22d and Jefferson streets, Chicago; Dunbar & Co., 687 Fulton street, Chicago.

CAST-IRON CHIMNEY TOPS.

From Driggs & Jones, Clinton, Mo.

Where can we get cast-iron revolving chimney tops?

Ans.—Sterling Foundry Co., Sterling, Ill.; Loetscher-Ryan Mfg. Co., Dubuque, Ia.; Quinn Wire & Iron Works, Scranton, Ia.

TINNING GRAY IRON CASTINGS.

From Macomb Sheet Metal Works, Macomb, Ill.

Kindly give us a recipe for tinning gray iron castings.

Ans.—The following is take from THE AMERICAN ARTISAN'S "Manual of Receipts": "Have your metal clean, by first scouring, and then swabbing out with dilute acid. Then heat it, and with a wisp of greasy tow rub the molten tin all over. In the dipping process

all you have to do is to get the pieces quite clean, and then immerse in a tank of oil or tallow, and when hot pass into the tank of molten tin."

ELECTROLIERS.

FROM SOMMERS HARDWARE CO., CLARKSDALE, MISS.

Kindly furnish us with the names and addresses of

Ans.—American Light & Fixture Co., 66 Lake street; Chicago Gas & Electric Fixture Co., 11 S. Jefferson street.

PLATINUM POINTS FOR SPARKER PLUG ON GASOLINE ENGINE.

From Frank Wostrel, Waconia, Minn.

Where can I get pure platinum points for sparker plug on gasoline engines?

Ans.—Colborne Mfg. Co., 31 E. Indiana street, Chicago.

ITEMS.

W. H. Wherry, formerly connected with the McVoy Sheet & Tin Plate Co., Chicago, will travel the state of Wisconsin in the interests of Follansbee Bros. Co., Pittsburg, manufacturers of sheets and tin plate. Mr. Wherry's headquarters are at 401 Iron Block, Milwaukee.

Follansbee Bros.' Co., Pittsburg, Pa., tin plate manufacturers and dealers in tinners' supplies of all kinds, say that Scott's extra coated hammered open hearth roofing tin is coming more and more into popularity. The coating is properly proportioned of what is said to be the best tin and lead. The plate is soft and works easily, and for lasting qualities the manufacturers say that it cannot be surpassed. It has been used, they say, 25 years without complaint. When writing Follansbee Bros.' Co. kindly mention THE AMERICAN ARTISAN.

The Niles Iron & Steel Co. of Niles, Ohio, heretofore known as the Niles Iron & Sheet Co., is enlarging its field of operations. A new department has been added for the manufacture of corrugated sheets, eaves trough, conductor pipe, and other galvanized and black sheet products. The plant which is an important addition to the company's mills, went into operation on August 31. Its equipment, which is stated to be of the most modern type, includes a new 25,000 horsepower Corliss engine, an advanced system of rope transmission of power, and an outfit of up-to-date operating machinery. The company's officers are: W. A. Thomas, president; C. G. Thomas, vice-president and treasurer; C. G. Thomas, secretary.

The Eagle Cornice & Sheet Metal Works of Tampa, Fla., have been granted a patent on a fire-proof shutter, an invention of Hugh L. Turner, a member of the firm. The application was filed on May 6 of this year and the patent granted on August 18. In combination with oppositely disposed corrugated plates, are hinge straps extending between and secured to the plates and constituting spacing devices, each strap having oppositely extending portions between the plates at one terminal thereof, and a hinge member at its other end and beyond the plates. The corrugated plates interposed between T-irons are secured upon opposite faces of the webs thereof, the plates forming air-cells therebetween, and the irons constituting closures for the ends of the cells.

F. O. Shoedinger, 146 North Third street, Columbus, O., says that steel-wainscot metal for interior ornamentation of side walls is being used more and more each year. It is said to have passed the experimental stage and to be now recognized by leading architects and contractors the world over as being more sanitary, lasting and in every way superior to plaster or wood. It remains in place as long as the building itself, and is said to admit of more varied designs and ornamentation than any other material. In the new catalogue of F. O. Schoedinger the newest patterns and most modern designs on the market are shown. When writing for this catalogue kindly mention THE AMERICAN ARTISAN.

Burt ventilators, made by The Burt Mfg. Co., Akron, O., are said by the makers to be absolutely storm-proof. They are fitted with the company's patent adjustable sliding-sleeve-damper, and they can be regulated to any degree of ventilation required. The damper is held permanently in place by a special patent attachment and it is not necessary to tie the rope or chain to a nail, hook or post as is very often done. When the glass top is used the ventilator can be entirely closed during the winter months without affecting the light, which in some cases is entirely shut out by the closing of the ventilator. Burt ventilators are suitable for factories, warehouses, churches, schools, barns, and for all classes of buildings where light and ventilation are required. When writing The Burt Mfg. Co. kindly mention THE AMERICAN ARTISAN.

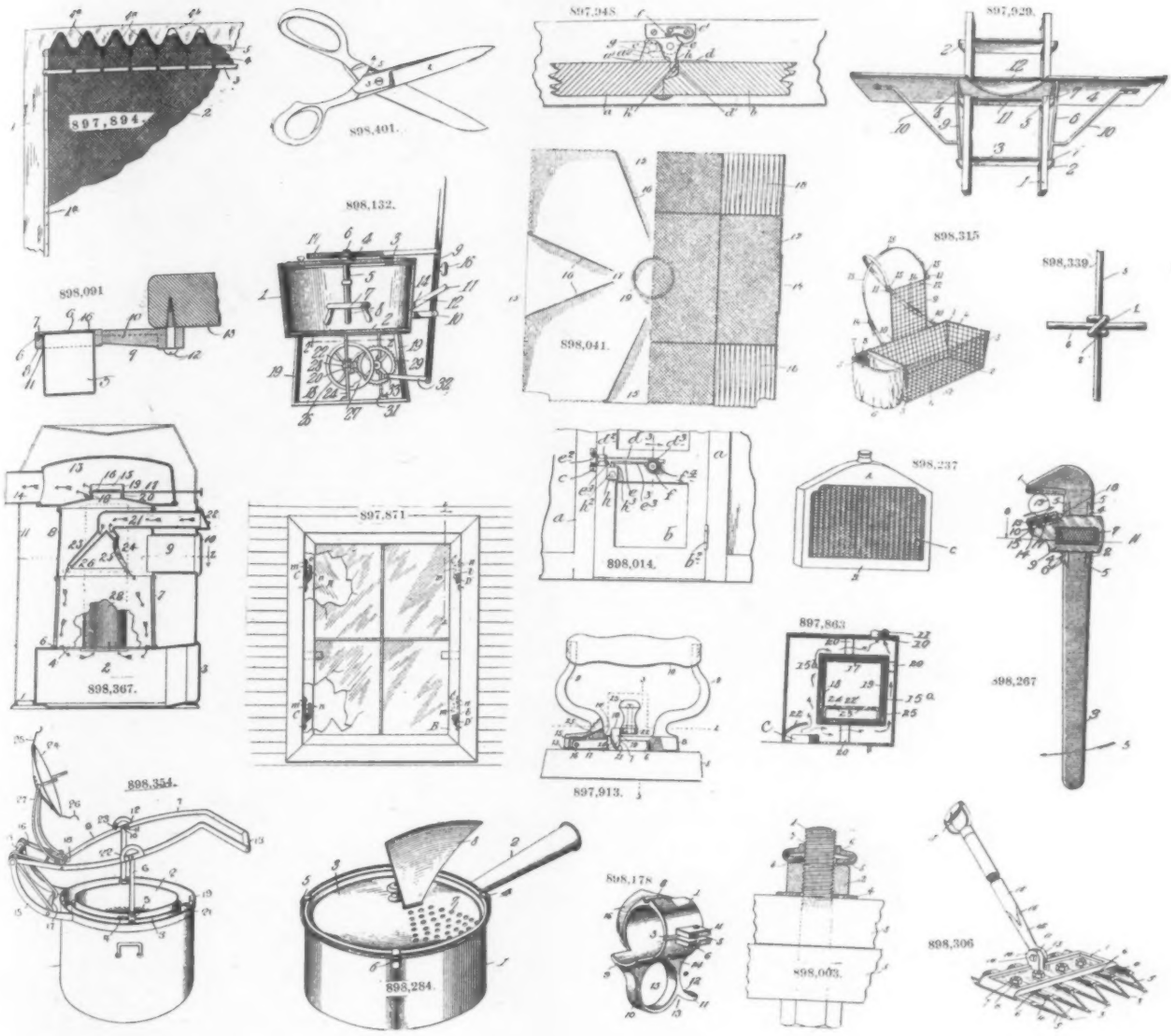
"MORE DOLLARS."

"More Dollars" is the title of a very interesting and highly instructive booklet issued by "System," a Chicago monthly magazine for business men, and employers and employes everywhere who want to do more, earn more and be more. This booklet contains chapters on such subjects as "The Great American University of Business"; "Success Hangs on the Know-How"; "Easiest Entrance to a Bigger Business—A Better Salary"; "How to Become a High-Salaried Department Head"; "Let the Other Man do the Detail"; "How to Buy, Manage, Direct and Win Human Ability"; "How to Become a Master Salesman or Sales Manager"; "Advertising—The Long Arm of Business," etc. "More Dollars" tells of "System's" "Business Man's Library," how it has shaped men's destinies, enriched men's futures and turned the hopes and dreams of careers into tangible success realities. A 9,059-word business book will be sent free to the sender of a postal card addressed to "System," Dept. 182-3, 151-153 Wabash avenue, Chicago. When writing for this book kindly mention THE AMERICAN ARTISAN.

Merely publishing your name, address and line of business is advertising, but it is not good advertising.

Study every customer and cultivate his acquaintance. It will help you increase your sales.

NEW PATENTS.



897,863—Stove or Heater Attachment. George T. Adcock, Burns, Tenn. Filed Jan. 7, 1908. Serial No. 409,649.

897,871—Fastening Device for Outside Windows. Simon S. Brown, Waterville, Me. Filed June 1, 1908. Serial No. 436,020.

897,894—Out Trapping Fly Escape Screen. Henry A. Hanson, Grano, N. D. Filed Dec. 23, 1907. Serial No. 407,821.

897,913—Sad Iron. Alexander Luethi, Lakemills, Wis. Filed Sept. 17, 1906. Serial No. 334,876.

897,929—Detachable Shelf for Store Ladders. George H. Ridout, Luling, Tex. Filed May 23, 1908. Serial No. 434,590.

897,948—Means for Locking Doors and the Like. Arthur Windsor, Edinburgh, Scotland. Filed Feb. 29, 1908. Serial No. 418,558.

898,003—Nut Lock. Edward Posson, Chicago, Ill. Filed July 5, 1906. Serial No. 324,913.

898,014—Door Lock. Gustave E. Spiltoir, New York, N. Y. Filed April 9, 1908. Serial No. 426,036.

898,041—Animal Trap. Decatur D. Dennis, San Antonio, Tex. Filed Jan. 20, 1908. Serial No. 411,718.

898,091—Ash Receptacle. Martin J. Carney, Brookline, Mass. Filed Sept. 6, 1907. Serial No. 391,564.

898,132—Operating Mechanism for Washing Machines Roswell C. Otis and William W. Gundrum, Casey, Iowa. Filed July 3, 1907. Serial No. 382,048.

898,178—Combined Grip and Sight for Firearms. George C. Bourne, Worcester, Mass. Filed Aug. 16, 1907. Serial No. 388,928.

898,237—Radiator for Automobiles. Joseph B. Long and Christopher Wright, Chicago, Ill., assignors to Long Manufacturing Company, Chicago, Ill., a corporation of Illinois. Filed Oct. 23, 1905. Serial No. 284,099.

898,267—Wrench. Harvey N. Rothweiler, Seattle, Wash. Filed March 23, 1908. Serial No. 422,859.

898,284—Culinary Vessel. Joseph Stuber, Peoria, Ill., assignor of one-half to Henry G. Kuck, Peoria, Ill. Filed Sept. 18, 1903. Serial No. 173,722.

898,306—Ice Cutting Tool. John G. Bodenstein, Staatsburg, N. Y. Filed Jan. 14, 1908. Serial No. 410,789.

898,315—Combined Clothes and Clothes Pin Receptacle. Walter H. Carpenter, Lehr, N. D. Filed May 11, 1908. Serial No. 432,030.

898,339—Wire Fence Tie. Washington M. Dillon, Sterling, Ill. Filed Nov. 14, 1907. Serial No. 402,176.

898,354—Dish Washer. Joel M. Gilbert, West Somers, N. Y. Filed Feb. 18, 1908. Serial No. 416,519.

898,367—Stove and Furnace. Hiram J. Hough, Anthony J. Dietrich and William F. Brunswick, Akron, Ohio. Filed June 26, 1907. Serial No. 380,930.

898,401—Shears and Scissors. John J. Booth, Rockford, Ill. Filed May 1, 1908. Serial No. 430,362.

Trade Report.

HARDWARE.

The hardware trade has shown a general improvement during the past week. Both jobbers and retailers show a disposition to purchase more freely, though in the East a spirit of caution still seems to dominate the situation. Stocks in the hands of both jobbers and retailers are now at a minimum, and replenishment is about at hand. The placing of raw material on firmer and more stable bases has hardened prices somewhat, which has in a measure stimulated buying. Business in wire nails continues to show no abatement. Mills are getting a heavy volume of orders for immediate shipment, although some fair sized contracts are reported being placed. Specifications against old contracts continue heavy, usually accompanied with orders to hurry deliveries. Prices are being well maintained and admit of little shading. The cut nail market also shows considerable improvement, while there is a good demand for spot goods. In barb wire there is a good business in progress, especially to agricultural sections, and mills report a good volume of orders on their books. The South and Southwest are reported to be buying heavily for fall shipment. Plain wire is in better demand, and both the volume and size of orders coming to the mills shows a marked increase. Wire fencing concerns are taking good orders, and have good inquiries in the market.

The base price of wire nails at the mill is $1.95 per keg. The jobbing price is $2 at the mill for full carloads, $2.10 at the mill for less than carloads and $2.40 out of store. The base price of cut nails at the mill is $1.80 per keg. The jobbing price is $1.85 for full carloads at the mill, $1.95 for less than carloads at the mill and $2.25 out of store.

In the Chicago market wire nails are quoted at $2.13; painted barb wire, $2.28; galvanized barb wire, $2.58; smooth annealed wire, $1.98; smooth galvanized wire, $2.28; galvanized staples, $2.53; polished staples, $2.23. Quotations to retailers in car lots are 5 cents higher and in less than car lots 15 cents higher.

An advance of 5 cents per 25-pound bag of drop shot has been announced. Carriage and machine bolts have been advanced 2½ per cent in price, and there has been a 10 per cent increase in the prices of heavy strap and T hinges and steel butts.

TIN PLATE.

The tin plate trade will not be so active from now on, as the season's rush is about over. Last week the leading interest in the industry was operating 123 of its mills. The independent concerns are not operating as many mills as they were a week or two ago, and it is said that many of them will soon close for lack of new orders. Galvanized plates continue in good request but black plates are still slow. Prices are $3.89 for 100-pound coke plates, f. o. b. New York and $3.70 at Pittsburg mills with the independents quoting $3.65.

Am. coke tins, I. C., from store, New York:	
Bessemer steel, 107 lbs., 14x20	$4.35@4.40
Bessemer steel, 100 lbs., 14x20	4.20@4.25
Bessemer steel, 95 lbs., 14x20	4.10@4.15
Bessemer steel, 90 lbs., 14x20	4.00@4.05
Am. charcoal terne, 8-lb. coating—	
Worcester grades, 14x20, 107 lbs	4.30@4.35
Worcester grades, 14x20, 100 lbs	4.15@4.20
Worcester grades, 20x28, 200 lbs	8.05@8.10
For prompt shipment, f. o. b. mill—	
Coke, tins, 14x20, I. C	3.85@3.90
Coke, tins, 14x20, 100 lbs	3.70@3.75
Coke, tins, 14x20, 95 lbs	3.65@3.70
Coke, tins, 14x20, 90 lbs	3.60@3.65
Charcoal, terne, 20x28, I. C	7.30@7.35
Charcoal, terne, 20x28, 200 lbs	7.00@7.05

Usual difference for odd sizes and weights.

SHEETS.

Conditions in the sheet market remain practically unchanged, and consumers are not buying for extended deliveries. Galvanized sheets are in fairly good request but the movement in black sheets is not very strong. Mills have very little difficulty in filling all orders promptly.

The following are New York prices for 500-bundle lots and over, f. o. b. mill:

	Galvanized Net.
No. 30	4.05
No. 29	3.80
No. 28	3.65
No. 27	3.35
Nos. 25 and 26	3.15
Nos. 22 and 24	2.95

COPPER.

There is a slightly easier market for ingot copper, and it looks somewhat as though there was to be a repetition of the recent speculative manipulation of the market. Apparently some producers have become discouraged at the continued dullness and are showing a little more anxiety for business. The larger producers, however, are still out of the market, and if matters are again given over into the hands of the speculators they will not be parties to it. The way the thing has been worked out before is something like this: After a persistent bear campaign the market is depressed enough to suit the ideas of the speculative ring and its members become free buyers. The natural elasticity of the market then causes an upward turn, of which the speculators reap the principal advantage, while the umbrella is held for them by the producers. An attempt is being made to play the same trick again, and as there is a limit to the present consumptive demand for the better grades of copper it may succeed. Some of the leading producers are still holding Lake at 14 cents, but the quotation is really 13¾@14 cents, with electrolytic at 13.65 cents and casting at 13½ cents. The producers still have copper to sell, but are very confident that the future

will show the market setting strongly in an upward direction, and thus are content to keep out of the market for the present. The London market shows a slight decline for the week, amounting to 7s 6d on spot and 10s on futures.

Sheet copper is firm and unchanged, the base price being unchanged at 18 cents. There has been no change in yellow metal, quotations being 17 cents for dimensions, 15 cents for sheathing and sheathing nails, 16 cents for slating nails and 17 cents for keel and stem metal. All copper rivets and burrs have been advanced 5 per cent in price.

Extreme fluctuations for this year:

	Highest.	Lowest.
Electrolytic copper, spot	13⅞	12¼
Lake copper, spot	14	12⅜
Casting copper, spot	13¾	12⅛

SPELTER.

Spelter is quiet but firm, the New York quotation being $4.82½@4.85 for spot and nearby delivery. The St. Louis market is firm at $4.65. The Boston jobbing price is steady and unchanged at 5@5⅛ cents. London quotes spelter at £19 10s.

	Highest.	Lowest.
Spot, New York	$4.80	$4.30
Spot, London	£22 0 0	£18 0 0

PIG IRON.

The pig iron market continues quiet. The foundries in the East are still complaining of a lack of business, and there is no doubt that the present dullness is a disappointment to both sellers and buyers of pig iron. The current business is mostly in small lots for deliveries scattered through the rest of this year. Some large buyers are making tentative inquiries for delivery next year, but they find the furnacemen very cautious, and not at all anxious to contract so far ahead at present quotations. The production of pig iron throughout the country shows a steady increase, the total for August being 1,348,831 tons, the largest month's work since last December. Based on the August daily average, the total production for 1908 is estimated at 15,881,150 tons, against 25,781,361 tons in 1907, 25,307,190 tons in 1906, 22,922,300 tons in 1905, 16,497,033 tons in 1904, 17,821,301 tons in 1903 and 15,078,354 tons in 1902. The settlement of the coal strike in the Alabama district is expected by some in the trade to result in a larger production and a consequent easing up of prices. They hope to see the market recede to possibly $12 again, and predict that a good business will then be forthcoming. It is pointed out, however, that the natural increase in business should be sufficient to take care of any possible increase in the Alabama production, and if the new business comes into sight as it ought to there will be no surplus iron offering. Thus far there has been no weakening in values, North or South. The leading Alabama furnaces are still asking $12.50@13 f. o. b. Birmingham, and it is reported that one company has refused $13.50 for a small lot for early shipment. At the same time it is undoubtedly true that the bulk of the current sales are made at figures nearer $12.50 than $13. Pennsylvania iron is slightly firmer at $17.75@18.25, New England delivery.

CHICAGO MARKET.

Lake Superior charcoal	$19.50
Northern foundry No. 1	17.00@17.50
Northern foundry No. 2	16.50@17.00
Northern foundry No. 3	16.00@16.50
Southern foundry No. 1	17.35@17.85
Southern foundry No. 2	16.85@17.35
Southern foundry No. 3	16.35@16.85
Southern foundry No. 4	15.85@16.35
Southern No. 1, soft	17.35@17.85
Southern No. 2, soft	16.85@17.35
Southern Gray forge	15.60@16.10
Southern mottled	15.35@15.60

PITTSBURG MARKET.

No. 1 foundry	15.60@16.10
No. 2 foundry	15.25@15.50
Gray forge	14.65@14.90
Bessemer	16.15@16.40
Basic	15.40@15.65

BIRMINGHAM MARKET.

No. 1 foundry	13.00@13.50
No. 1 soft	13.00@13.25
No. 2 foundry	12.50@12.75
No. 2 soft	12.50@12.75
Gray forge	11.00@11.50

Rogers, Brown & Co., Cincinnati, will say in their weekly report: "No new developments have marked the week in the pig iron trade, business proceeding at about the same rate and volume of shipments slightly increased. There is more effort on the part of buyers to have iron come forward on existing contracts, which is better indication than they have furnished for some time. Good inquiry for forward delivery is still in evidence.

"In this territory the lower foundry and forge grades are scarce and the inquiry for them has been insistent. Production has increased, but the movement of pig iron and consumption appears to be keeping pace with it and all of it going into immediate melt.

"The most lively business now is in finished lines for agricultural supplies and this tonnage has recently taken a most remarkable spurt.

"Railroad buying has not been fully realized, but is at best only deferred, as materials continue to wear and will have to be replaced. The buying of rails and steel car equipment has not been as large as was anticipated.

"Coke is without change as regards price and interest in the market, but production has been seriously decreased during the week on account of drought in all districts. This has interfered with manufacture and all ovens are experiencing the same difficulty."

Matthew Addy & Co., Cincinnati, will say in their weekly report: "Nothing unusual has occurred in the iron market this week, although some very large purchases of basic in the east may act as a tonic. In this market a pipe company and a steel company have each placed a good order, but with these exceptions the buying has been of the regular day to day kind. There is something doing all the time, but on the whole it is a waiting market. There seems to be a tendency on the part of consumers to postpone purchasing for forward shipment until they are assured that the advance in the price of southern iron will hold. As a matter of fact, the southern market is very firm and the higher prices are being adhered to rigidly. The heavy buying movement early in the summer filled the order books of the southern furnaces so that they have all the business they need and are under no necessity to go gunning for trade; they can wait if necessary over the balance of the year. So the hopes of the melters of iron that the south will be obliged soon to seek orders does not seem to rest on any very firm foundation. It is a fact, however, that in most markets northern prices are lower than southern and in consequence the bulk of what business is going is being secured by northern furnaces."

Current Hardware and Metal Prices.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly.

METALS.

FIRST QUALITY BRIGHT PLATES.

		Per Box.
IC	14x20	$6 40
IX	14x20	7 45
IXX	14x20	8 60
IXXX	14x20	9 85
IXXXX	14x20	11 00
IC	20x28	13 70
IX	20x28	15 70
IXX	20x28	18 15
IXXX	20x28	20 55
IXXXX	20x28	22 95

COKE PLATES.

Cokes, 180 lbs	IC	20x28	$ 8 5
Cokes, 200 lbs	IC	20x28	9 00
Cokes, 216 lbs	IC	20x28	9 50
Cokes, 270 lbs	IX	20x28	11 25

PIG IRON.

North'n Fdy., No. 1	$17 50@$18 00
North'n Fdy., No. 2	17 00@ 17 50
North'n Fdy., No. 3	16 50@ 17 00
Southern Fdy., No. 1	17 35@ 17 85
Southern Fdy., No. 2	16 85@ 17 35
Southern Fdy., No. 3	16 35@ 16 85
Southern Fdy., No. 4	15 85@ 16 35
Southern No. 1 Soft	17 35@ 17 85
Southern No. 2 Soft	16 85@ 17 35
Southern Gray Forge	15 60@ 16 10
Southern Mottled	15 35@ 15 60
Lake Sup. Charcoal	19 50@ 20 00
Southern Silveries, 4% Silicon	18 85@ 19 35
Southern Silveries, 5% Silicon	19 35@ 19 85
Southern Silveries, 3% Silicon	19 85@ 20 35
Jackson Co. Silveries, 6 per cent	19 90@ 20 40
Jackson Co. Silveries, 8 per cent	20 90@ 21 40
Jackson Co. Silveries, 10 per cent	21 90@ 22 40
Malleable Bessemer	17 25@ 17 75
Standard Bessemer	18 25@ 18 75
Alabama Basic	16 85@ 17 35

BLACK STEEL SHEETS.

No. 12	per 100 lbs.	$2 20@$2 30
No. 14	per 100 lbs.	2 25@ 2 35
No. 16	per 100 lbs.	2 35@ 2 45
Nos. 18-20	per 100 lbs.	2 60@ 2 65
Nos. 22-24	per 100 lbs.	2 65@ 2 70
No. 26	per 100 lbs.	2 70@ 2 75
No 27	per 100 lbs.	2 75@ 2 80
No 28	per 100 lbs.	2 85@ 2 95

GALVANIZED

No. 10	per 100 lbs.	$3 05@$3 10
Nos. 12-14	per 100 lbs.	3 05@ 3 10
No. 16	per 100 lbs.	3 05@ 3 10
Nos. 18-20	per 100 lbs.	3 15@ 3 25
Nos. 22-24	per 100 lbs.	3 30@ 3 35
No. 26	per 100 lbs.	3 50@ 3 55
No. 27	per 100 lbs.	3 70@ 3 75
No. 28	per 100 lbs.	3 90@ 4 00

POLISHED SHEET STEEL.

No. 24	per 100 lbs	$4 90
No. 26	per 100 lbs.	5 00
No. 27	per 100 lbs.	5 10
No. 28	per 100 lbs.	5 20

SMOOTH STEEL.

Wood's Smooth,	No. 20	$3 05
" "	No. 22-24	3 10
" "	No. 25-26	3 15
" "	No. 27	3 20
" "	No. 28	3 30

PATENT PLANISHED SHEET IRON.

Patent Planished Sheet Iron, "A" $10.20, "B" $9 20

PATENT PLANISHED SHEET STEEL.

Dickey Planished Sheet Steel 8½c

SOLDER.

XXX Guaranteed ½ & ½	per lb.	18 c
Commercial ½ & ½	per lb.	17½c
No. 1 Plumbers		15½c

SHEET ZINC.

500 lb. Casks	case, per cwt.	$7 15
300 lb. Casks	per cwt.	7 15
Sheets	per cwt.	7 15

COPPER.

Copper sheet, 100 lbs. over, base 17c

TIN PIGS AND BARS.

Banca, pigs, per lb	29 c
Straights, pigs, per lb	29 c
Straights in bars, per lb	33 c

LEAD.

American Pig	4 c
Bar	4 c
National (White) brands (in less than 100 lb lots), per lb	8½c

Sheet.

Full coils	per 100 lbs.	$9 00
Cut coils	per 100 lbs.	9 50

HARDWARE.

ADZES.

Carpenters'.
Plumbs 40%

Coopers'.
Barton's 20%
White's 15%

Railroad
Plumbs 40%

Ship.
Plumbs 40%
White's 12½%

AMMUNITION.

Caps, Percussion—per 1,000.

F. L Waterproof, 1-10s	40c
G D	35c
Musket	60c

Shells, Loaded—
Loaded with Black Powder 40%
Loaded with Smokeless Powder, medium grade 40 & 5%
Loaded with Smokeless Powder, high grade 40 & 10 & 10%

Union Metallic Cartridge Co.:
New Club, Black Powders 40%
Nitro Club, Smokeless Powders, 40 & 5%
Arrow, Smokeless Powders 40 & 10 & 10%

Winchester:
Smokeless Repeater Grade 40 & 5%
Smokeless Leader Grade 40&10&10%
Black Powder 40%

Gun Wads—per 1,000.
Winchester Gun Wads 15%

Powder.

		Each.
DuPont's Sporting,	kegs	$ 50
" "	½ kegs	2 50
" "	¼ kegs	1 40
Dupont's Sm'k'less	50-lb. drum	22 45
" "	25-lb. kegs	11 30
" "	12½-lb. kegs	5 80
" "	6¼-lb. kegs	2 97
"	1-lb. cans	15

Shot.

Drop shot, sizes smaller than B, 25-lb. bags, per bag	1 95
Drop shot, B and larger sizes, 25-lb. bags, per bag	2 20
Buck Shot, 25-lb. bags, per bag	2 20
Chilled Shot, 25-lb. bags, "	2 20

ANCHORS

Expansion Screw Anchors 10%

ANVILS

Trenton, 70 to 80 lbs	9½c per lb
Trenton, 81 to 150 lbs	9½c per lb

ASBESTOS.

Board and Paper 33⅓%

AUGURS.

Boring Machine 70%
Irwin's 40&10%
Carpenter's Nut 70%
Hollow.
Bonney's—list $30.00 75&5%
Stearns, No. 3 36 00
Post Hole.
Digwell, 8-inch per doz. 12 50
Iwan's Post Hole and Well 40%
Vaughan's, 4 to 9-in., per doz. 6 25
Rafting.
Snell's 50&5%
Ship.
Ford's, with or wi'out screw 40-12½%
Snell's " " " 40-5%

AWLS.

Brad.

No. 3 Handled	per doz.	$0 40
No. 1050 Handled	"	80
Shouldered, assorted, 1 to 4	per gro.	$1 20
Patent asst'd, 1 to 4	"	85

Harness.

Common	"	95
Patent	"	90

Peg.

Shouldered	"	1 20
Patent	"	60

Scratch.

No 1 handled	"	4 80
No. 15, socket handled	per doz.	1 25
No. 7 Stanley		1 80

Sewing.

Common	per gro.	90
Patent	"	90

AXES.

Boy's Handled.

Lippincott, 3 lb	per doz.	$6 00
Falls City	"	6 00

Broad.
Plumbs, West, Pat 33⅓%
" Can. Pat 40%
" Firemen's (handled) per doz $1, 75
Plumbs, Miners' (handled) " 6 75

Single Bitted (handled)

Gladiator . 3 to 4 lbs , per doz	$11 00
Flint Edge " " "	9 25
Standard .. " " "	9 25
Elec Chopper, Forest Clipper	10 50
Perfect Premier " "	10 00
Crown " "	7 00

Single Bitted (without handles)

Gladiator...3 to 4 lbs.	per doz.	$8 50
Flint Edge. "	"	7 00
Standard... "	"	7 00
Electric Chopper"	"	8 25
Perfect..... "	"	7 75
Crown..... "	"	6 25

Double Bitted (without handles).

Gladiator...3 to 4 lbs.	per doz.	11 50
Flint Edge. "	"	9 75
Perfect..... "	"	11 00

The above prices on axes of 3 to 4 lbs. are the base prices.
3½ to 4½ lbs. advance 25c
4 to 5 lbs. advance 50c.
4½ to 5½ lbs. advance 75c.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$2.50	3.75	4.50	5.00

BALANCES, SPRING.

Prary's 40%
Pelouze 20%

BARS, CROW.

Pinch or Wedge Point..per cwt. $3 75

BASKETS.

Clothes.

Small Willow	per doz.	$7 00
Medium "	"	8 75
Large "	"	10 50

Galvanized Iron.

	½ bu.	1 bu.	1½ bu.
Per doz.	$4 75	6 50	8 00

BEATERS.

Carpet. per doz.
No. 10 Coppered Spring Wire. $0 90
No. 12 Spring Wire 1 10
No. 10 Preston 1 10

Egg. Per doz.
No. 50 Imp. Dover $0 75
No. 102 " " tinned 85
No. 150 " " hotel 1 40
No. 10 Heavy hotel tinned 2 10
No. 13 " " " 3 30
No. 15 " " " 3 60
No. 18 " " " 4 50

BELLOWS.

Blacksmiths' 65%

Hand.
8-inch per doz. $8 50
10-inch " 10 50

Moulders'.
12-inch " 12 50

BELLS.

Call.
3-inch Nickeled Rotary Bell, Bronzed base per doz. $5 00

Cow.
High Grade 60%
Kentucky 65&10%

Door. Per doz.
New Departure Automatic $6 00
Rotary.
3 -in. Old Copper Bell 4 00
3 -in. Old Copper Bell, fancy 6 00
3 -in. Nickeled Steel Bell 4 50
3½-in. Nickeled Steel Bell 5 00

Hand.
Hand Bells, polished 50&5%
White Metal 40%
Nickel Plated 30%
Swiss 40&33⅓%
Silver Chime 33⅓%

Miscellaneous.
Church and School, steel alloy 50%
Farm, lbs 40 50 75 100
Each $1.25 1.60 2.35 2.85

BEVELS, TEE

Stanley's, rosewood handle, new list 25%
Stanley's iron handle 25%

BINDING, OILCLOTH.

Zinc 80%
Brass 70&10%
Brass plated 75&5%

BITS.

Auger.
Extra Double Spur 70&10%
Ford's Car and Machine 40&10%
Triumph 50&5%
Ford's Ship 40&10%
Irwin 50%
Russell Jenning's 25&10%
Clark's Expansive 60%
Steer's " Small list, $22.00 25%
" " Large " $26.00 25%
Irwin Car 45%
Ford's Ship Auger pattern Car 40&10%
Center 40&10%

Countersink.

No. 18 Wheeler's	per doz.	$1 25
No. 20 "	"	1 75
American Snail head	"	75
" Rose "	"	90
" Flat	"	75
Mayhew's Flat	"	1 25
" Snail	"	1 25

Dowell
New Jennings 40&10%

Gimlet.

Standard Double Cut		60%
German Pattern	per doz.	$0 60
German	"	65
Gouge	"	80
Spoon	"	80
Countersink	"	1 00

Reamer.

Jenning's Square	"	2 50
Standard Square	"	75
German Octagon	"	75

Screw Driver.

No. 7 Common	"	50
No. 1 Triumph	"	1 25
No. 2 " "	"	1 —
No. 340 Shepardson's	"	—
No. 1 Smith's	"	—

BLACKING, STOVE. (See Polish).

BLADES, SAW.

Butchers'.
Standard, ¾ & 1¼-in.....40%
Clock Spring.....40%
Star.....15%
Coil.....each, $1 50
Hack.
Disston's.....25&5%
Flexible.....33⅓&5%
Star.....20&5%
Wood.
Jackson's.....per doz. $2 25
Disston's—No. 6, 16, 26 & 045.. 4 25
Triumph..... 3 50
Forest Clipper..... 3 00

BLOCKS.

Snatch.
Wooden.....60&10%
Steel.....50%
Tackle.
Iron Strapped.....70%
Com. Steel..... ....60%

BOARDS. (New List)

Stove.....50&10%
Wash.
Globe, single.....per doz. $2 50
Globe, double..... " 3 35
Peace Maker..... " 3 00
Crystal Glass..... " 4 00
Brass King..... " 4 00
Nickel Plate..... " 4 15

BOBS, PLUMB.

Carpenters'.
No. 2, iron.....per doz. $0 65
No. 00, " ..... " 1 30
No. 0, " ..... " 1 80
No. 3, lead..... " 2 90
No. 4, " ..... " 3 40
No. 113, brass plated.. " 1 10
No. N30, nickel plat'd. " 1 30
No. N31, " " " 1 85

BOLTS.

Carriage, Machine, etc.
Carriage, ⅜x6 and sizes smaller and shorter.....70&10%
Carriage, sizes larger and longer than ⅜x6.....60&5%
Machine, ⅜x4 add sizes smaller and shorter.....70&10%
Machine, sizes larger and longer than ⅜x⅜x4.....60&5%
Elevator.....50-10&5%
Plow.....60&10%
Stove .....80&10%
Tire.....75%
Wagon Box Strap.....70%
Mortis, Door.
Gem, iron.....60%
Gem, bronze plated.....20%
Barrel.
Cast.....60%
Wrought.....
Wrought, bronzed.....50%
Flush.
Wrought .....56&10%
Spring.
Wrought.....
Wrought, heavy.....
Square.
Cast.....50&10%
Wrought.....

BORERS.

Angular.
Miller's Falls.....per doz. $13 00
Bung.
Doz.
Enterprise Mfg. Co 's No 1... $14 00
" " " No 2. . 18 50

BOXES

Mail, No.	1	2	10
Per doz	$3.50	5.00	17.50

Miter.
New Langdon.....15&5%
Stanley's.....30%
Seavey's.....each, $1 50

BRACES.

Barber's ..... 50&10&10@50&10&15%
Fray's Genuine Spofford's.....60%
" Nos. 66 to 146.....50%
" No. 0108..... $3 50
" No. 08..... 2 75
" No. 010..... 2 85

BRACKETS.

Hay-Rack.
Wenzelmann's No. 1, per doz. $9 00
" No. 2, " 9 60
Shelf.
Cast Iron, bronzed.....50-10&5%
Clover Wrought Steel.....70&10%
Clover Folding.....70%

BROILERS.

Wire..... 70%
No. Cwron, Self basting, 80doz .. $2 50

BUCKETS.

Pump, Rubber.
Wychoff.....per gro. $4 75
Cooper..... " 4 75
Champion..... " 7 50
Victor..... " 9 25
Star..... " 5 00
IXL..... " 6 75
Well.

Galv'd Qts.....	10	12	14
Per doz.....	$2.90	$3.25	$3.40

Wooden, top ear, plain, per doz. 4 00
" " swivel, " 5 10

BUCKS, SAW.

Folding.....per doz. $2 10

BURRS, RIVETING.

Copper Burrs only.....30%
Tinners' Iron Burrs only.....65&5%

BUTTS.

Cast Iron.....70&5%.
Wrought Brass (New List).....40%
Wrought Steel, Bright.
Wrought Steel, Japanned.
Nos. 731 and - .....70&10%

CALIPERS.

Double.....65&5%
Inside and Outside.....65&5%
Wing.....70%

CALKS.

Logger's Boot.
(Lufkin R. Co.'s), per M..... $3 75
Toe.
Shoenberger..... .....per lb 5 c
Bessemer..... ..... " 4¼c
American..... " 7 c
Swedes..... " 8¼c

CANS.

Cheese Factory.
Ontario Pattern.

Gallons.....	20	30	40
Each.....	$4.25	$5.00	$6.25

Milk.
Holstein.

Nos.....	300	301	302
Gals.....	5	8	10
Per doz.....	$26.00	$27.00	$29.00

Chicago Pattern.

Nos.....	105	108	110
Per doz.....	$19.00	$21.50	$23.00

Iowa Pattern.

Nos.....	408	410
Per doz.....	$23.50	$24.50

New Elgin Pattern.

Nos	705	708	710
Per doz.....	$25.00	$27.00	$28.00

Burn Pattern

Nos.....	700	701
Gals.....	8	10
Price.....	$2.40	$2.65

CAN OPENERS.

See Openers.

CAPS, GUN.

See Ammunition.

CARPET STRETCHERS.

See Stretchers.

CARRIERS.

Hay.
Diamond, Regular.....each, $3 85
Diamond, Sling..... " 6 50
Myers' Imperial ..... " 3 85
Myers' Clover Leaf..... " 4 00

CARTRIDGES.

See Ammunition.

CASTERS.

Standard—Ball Bearing.....50&10%
Bed.....60&5%
Common Plate.
Brass Wheel.....60&10%
Iron and porcelain wheels, new list.....60&5%
Philadelphia Plate, new list.....70%
Martin's.....60%
Payson's.....75&10%

CATCHERS, GRASS.

Carroll's, No. C.....per doz. $4 25
Wildermuth's.

Nos.....	1	2	3
Per doz.....	$5.60	$5.75	$6.25
Nos.....	4	5	6
Per doz.....	$6.75	$9.50	$10.00

CHAIN AND CHAINS.

Breast Chains.
Doubleslack.....dos. pairs, $5 75
With Covert Snaps. " 5 00
With Slide..... " 3 25
Without Slide..... " 2 85
Bright Ox Chains.
¼-in. $7.25; ⅜-in. $5.45 per 100 lbs.

Cable Coil Chain.

Inch.....	5/16	⅜	7/16	½
Per 100 lbs.	$10.80	$8.00	$7.00	$6.20

Inch.....	7/16	½	⅝	¾
Per 100 lbs.	$6.00	$5.90	$5.75	$5.65

Inch.....	⅞	1	1¼
Per 100 lbs.....	$5.55	$5.55	$5.65

Cable Log Chain.
Advance 25c per 100 lb. on Cable Coil.
Cow Tie Chains.
American, 2 toggle.....50&5%
" toggle and snap...50&5%
" open and closed ring.....50&5%
Halter Chains.
American, new list.....33⅓%
German.....60%
Niagara, new list 40%
Brown's, " 40%
Picture Chains.
Light Brass, 3 ft.....per doz. $0 65
Heavy Brass, 3 ft .... " 1 00
Pump Chain
Galvanized, per 100 lbs.....$5 50
Safety Chain.
Brass.....60%
Special Steel Loading Chain.

Inch.....	½	9/16	5/8
Per 100 lbs.....	$16.00	$13.50	$12.50

Stretcher Chains.
5/16-in. $8.50; ½-in. $7.75 per 100 lbs.
Tie-Out Chains.
Brown's.....70&5%
Trace Chains.
Western Standard.
6|— 6-2.....per pair 30c
6|— 8-2..... " 34c
6|— 8-3..... " 33c
6¼—10-2..... " 38c
7 — 8-2..... " 38c
7 —10-2..... " 42c
7 —10-1..... " 48c
7 —10-0..... " 60c
Add 2c per pair for Hooks.
Add 2c " for Twist Link.
Wagon Stay Chains.

Inch.....	½	9/16	⅝
Per 100 lbs.....	$6.50	$6.00	$5.50

CHALK, CARPENTERS'.

Blue.....per gro. 75c
Red..... " 65c
White..... " 55c
Common White School Crayon..... " 8c

CHARCOAL.

In bags..... per bag 90c

CHECKS, DOOR.

Blount.....33⅓%
Sargent's.....33⅓%

CHIMNEY TOPS.

Iwan's Volcano.....50%

CHISELS.

Box.

Inches.....	10	12	14
Round per doz....	$2.10	$2.25	$2.75
Flat " ...	2.85	3.60	4.20

Cold.
Good quality, ¾ in. and larger.....per lb. .12c
Smaller size per doz.....
Socket, Framing and Firmer.
Clover..... .....75&10%
Tanged, Firmer.
With handles..... 30&5%
Choppers, See *Cutters, Meat.*

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.....per doz. $6 25
Yankee, for Yankee Screw Drivers..... 5 00

CHURNS.

Anti-Bent Wood,

Gal.....	5	7	10
Each.....	$3.90	$4.60	$4.85

Belle, Barrel.....65&7½%
Common Dash, Gal. 4 5 6
Per doz..... $7.75 $8.50 $10.50
Union, Gal..... 5 7 10
Each..... $3.65 $3.90 $4.75

CLAMPS.

Adjustable.
Martin's.....30%
Carpenters'.
Steel Bar.....25%
Hose.
Sherman's, brass, ¾-in., per doz.. 42c
Double, brass, ¾-in., " 90c
Saw Filers.
Disston's list, $30.00.....30%
Stearns', No. 0, $3.50; No. 1, $11.50; No. 3, $5.00 doz.
Wentworth's, No. 1, $6.00; No. 3 $7.50.

CLAWS, TACK.

Cast, wood hdle..... per doz. 45@60c
Forged steel, wood hdle " $0.80
Solid steel..... " 1 00
Giant..... " 50

CLEANERS.

Drain.
Iwan's Adjustable.....55%
Iwan's Stationary.....40&5%
Pot.
Wire.....per doz. $0 55
Side-Walk.
Steel.....per doz. $3 25
XLCR .....65&5%

CLEAVERS

Family.

Griffin, Inch.....	6	7	8
Per doz.....	$5.50	$5.75	$6.25

Royal.....per doz. 2 25
Butchers.
Plumbs.....25%

CLEVISES

Malleable .....5½c lb.

CLIPPERS.

Bolt.....$1.90@4.75

CLIPS.

Axle.... .....65&5%
Damper.
Standard.....per doz. 65c
Troy..... " 38c
Hame..... " 17

CLOTH.

Emery.
Star.....50%
B. & A.....50%
Hardware Wire—full rolls (100 ft.)
2 to 3 incl., Galv.—in full roll... 2 75
4 and 5..... " .. 3 00
6..... " .. 3 25
7 and 8..... " .. 3 75
Screen Wire.
12 mesh, painted, per 100 sq. ft.. 1 35

COCKS AND FAUCETS.

Compression Plain Bibbs...60, 10&5%
Lever Bibb Cocks.....60, 10&5%
Compression Hose Bibbs ..50—10&5%
Telegraph Faucets (new list)..50—5%
Racking Cocks (new list)...60, 10&5%
Compression Lock C'ks(new list).70%
Andrew's Brass Faucets.....70%
Angle Plug Faucets, per doz....$0 85
Milk Can Faucets, per doz..$2.60-4.20
Petroleum Faucets .....75&5%

COLLARS, STOVE PIPE.

Inches.....	5	6	7
Plain Tin..per gro.	$1.90	$2.40	$3.50
Japanned Tin "	3.00	3.00	4.25
Lacquered Brass"	3.00	5.50	4.25

COMBS, CURRY.

Nos...	000	11	15	39	80	108
Per Doz..	$.37	.60	1.90	.90	1.15	.80
Nos...	299	320	390	532	620	1400
Per Doz.	$1.05	.85	1.35	1.20	.75	1.40

COMPASSES.

Carpenters'.....60—10—10%
Pencil—Faber's.....per doz. $1.00

COPPER—See Metals.

COPPERS.

Soldering.
1 lb.....per lb 30c
1½ lb.....31c 2 lb... " 29c
3 lb and larger..... " 26c

CORD.

Picture
White Wire (new list) .....85&10%
Sash.
Monarch Braided Flax ...per lb
Silver Lake. white. 7-32 in. "
Silver Lake, white, 8-32 in. "
Keystone.....8-32 in. " 29c

CORKSCREWS.

Humason & Beckley.....33⅓%
Walker's.....33⅓%
Williamson's Regular.....40& 10%
Williamson's Forged Worm.....50%

COTTERS, SPRING.

All sizes—new list.....90&30%

COUPLINGS, HOSE.

Brass.....per doz. $
Brass Plated..... " 8

COVERS, WAGON—See Tents.

CRADLES, GRAIN.

Morgan's Grapevine....per doz $22 [illegible]

CRAYONS—See Chalk.

CROW BARS.

Men or Wedge Point.....per lb 3½c

CUTTERS.

Glass.
Red Devil.....45%
Smith & Hemenway Co.....50%
Woodward.....40%
Meat.
Enterprise, Nos. 5, 10, 12, 22, 32 and 42.....25%
No. 202, list, $1.50 ea.....40&7½%
Pipe.
Stanwoods. No.... 1 2 3
Each.....$0.85 $1.50 $4.00
Slaw and Crout.
3-knife Crout.....per doz. $9 75
1-knife Slaw..... " 1 65
2-knife Slaw..... " 2 25
Washer..... " 7 75

DAMPERS, STOVE PIPE.

Jewel.....50&10%
American..... 50%

DIES AND STOCKS.

Discount..... .40%
King's, Little Giant..... 33⅓%

DIGGERS.

Post Hole.
Acme.....per doz. $9 25
Atlas..... " 9 00
Eureka..... " 7 50
Hercules..... " 10 25
Iwan's Split Handle.. " 7 50
Iwan's Perfection.... " 9 00
Iwan's Hercules pattern " 10 00
Ryan's..... " 17 00
See also Augers—Post Hole.
Dividers, Wing.....65&10%

DOOR CHECKS—See Door.

DOORS, SCREEN.

⅞ in. 4-panel, painted...per doz. $7 93
1⅛ in. 4-panel, painted... " 9 50
1⅛ in. 3-panel, natural pine, fancy..... " 12 40

DOOR HANGERS—See Hangers.

DRILLS.

Bit Stock.....60&10%
Blacksmith's Twist.....60%
Breast.
Fray's No. 9.....each, $1 75
Millers Falls No. 12..... " 2 10
Hand.
Goodell's Automatic.
Nos..... 01 03 3 20
Per doz.. $7.75 $12 50 $12.50 $11.00
Goodell's Single Gear. per doz. 15 75
Millers' Falls " " " 12 75
" " Double " " 15 25
Reciprocating.
Goodell's.....per doz. 16 50
Bit Stock.
Standard List.. 60&5%@60%@10

DRIVERS, SCREW.

Standard.....65&10%
Lock Ferrule.....60%
Champion.....40&10%
Champion Patter 70%
Clark's Interchangeable.....30%
Edison.....60%
Reed's Lightning.....45&5%
Goodell's Spiral.....50, 10, 5&2½%
Yankee Ratchet 50%
" " Spiral.....50&10%
Smith & Hemenway Co.....40&5%

EAVES TROUGH, GALVANIZED.

Terms, 2% for cash. Factory shipments generally delivered.

See also conductor pipe and elbows.

EGG BEATERS—See Beaters.

ELBOWS.

Adjustable Stove.
Inches..... 5 6 7
Smooth, per doz...$0.75 $0.85 $1.20
Plan'd, " 1.80 2.00 2.65
Corrugated Conductor.
Discount.....75&10%
Corrugated Stove.
Inches..... 5 6 7
Smooth, per doz..$0.85 $1.00 $1.50
Pol'd, " .. 1.40 1.65 2.25
Plan'd, " .. 2.15 2.65 3.40
Four-Piece Stove.
Inches..... 5 6 7
Smooth, per doz..$0.60 $0.65 $0.95
Planished, " .. 1.40 1.70 2.30

EMERY CLOTH—See Cloth.

EMERY TURKISH.

Size	5-lb. pkgs.	½ kegs.	kegs.
No 60 to 150, per lb..	6c	4c	4c
Flour..... " ...	5c	3c	3c

ENAMEL, IRON.

A-B Iron Enamel. 3 doz. case, ...per gro., 15 00
Peerless..... 1 25

EXTRACTORS, PIG.

See Forceps, Pig

EYES.

Bright Wire Screw—See Goods, B. W.
Drifting Pick.....60, 10&5%
Hooks and—
Brass.....50&10%
Iron.....70%

FASTENERS, STORM SASH.

Schroeder's.....per doz. $0.85
Sensible..... " 1 15

FAUCETS—See Cocks.

FILES AND RASPS.

Delta.....70%
Kearney & Foot.....75&10%

FLUE STOPPERS—See Stoppers.

FORCEPS, PIG.

Superior.....per doz. $4 75
Whisson's Imp..... " 5 25

FORKS.

These goods are sold net this year.

Barley.
Steel New List.....65&10%
Wood, 4-tines, per doz.....$5 00
Coal, Coke, Cottonseed.....30%
Hay.
2-tine.....60%
3 " .....60&5%
4 " .....60&10%
Digging.....65&5%
Scoop..... 30%
Header.
3-tine.....60&5%
4 " .....60&5%
Manure.
4-tine 60%
Ore.....40%
Spading.

FRAMES.

Hack Saw.
Union.....per doz. $5 75
Jenning's adj..... " 7 50
Cast..... " 2 50

FREEZERS, ICE CREAM.

Arctic.
Qts..... 1 2 3 4 6
Each...$1.10 1.30 1.50 1.80 2 30
Qts..... 8 10 12 15
Each.....$2.95 3.80 4.50 5.20

GAUGES

Butt and Rabbet.
Cream Pail.
Fairmont.....per doz. $3 75
Marking, Mortise, etc.....50&10%
Saw.
Wire.
Disston's.....25%

GIMLETS.

Discount.....35@40%

GLASS, WINDOW.

Single..... 90&20%
Double.....90&25%

GLASSES, LEVEL.

GLUE.

Bulk.
B Amber.....per lb. 12 c
A White..... " 15 c
H. S. Amber..... " 16½c
Liquid.
Army & Navy.....40%
Le Page's—
List "A".....37½%
List "B".....33⅓%
List "C".....25%

GOODS.

Bright Wire.....90%

GREASE, AXLE.

Wood Boxes.
Diamond.....per gro. $5 50
Frazer's..... 9 50
Hub Lightning..... 5 25
Paragon..... 6 75
Wood Pails.
Frazer's, 15 lb. 80c; 25 lb. $1.30 each.
Hub Lightning, 15 lb. 55c; 25 lb. 70c each.
Tin Cans.
Chamellene Graphite.
1 lb. per gross.....$9 50
3 lb. per gross.....25 00
5 lb. per gross.....37 00

GRIDDLES.

Soapstone.....33⅓%

GRINDSTONES.

Family.
Inches..... 7 8 9
Per doz.....$8.25 9.00 10.50
Loose.
Per ton.....$20 00@$21 00
Mounted.
Ball Bearing..... 1 2 3
Each.....$3.15 3.00 2.85
Common Bearing 1 2 3
Each.....$3.00 2.80 2.65

GUN WADS
(See Ammunition.)

HAPTS, AWL.

Brad.
Common.....per doz. $0 19
Peg.
Common..... " 22
Patent, plain top..... " 47
Patent, leather top... " 52
Sewing.
Common..... " 22
Patent..... " 52

HALTERS.

Jute Rope.....per doz. $1 10
Sisal Rope..... " 1 85
Web..... " 2 00
Leather, rope tie..... " 8 50
Leather, leather tie..... " 11 50

HAMMERS, HANDLED.

Blacksmiths' Hand.
Plumbs.....60&5%
Engineers'.
Plumbs.....60&5%
Farriers'.
Plumbs.....40&10%
Machinists'.
Plumbs.....60&5%
Nail.
Plumbs.....40&7½%
Quaker City.....per doz. $3 50
Cast..... " 1 15
Maydole's.....30&5%
Riveting.
Plumbs.....40&12½%
Shoe.
Cast.....per doz. $0 75
Tack.
All Iron.....per doz. $0 35
Pol'd Iron, Hickory hdl. " 50
Mall. Iron, Inlaid..... " 1 55
Magnetic..... 1 2 3
Per doz.....$0.70 .80 1.00
Magazine.. .....per doz. 4 75

HAMMERS, HEAVY.

Heavy Hammers and Sledges.
Under 5 lbs .....80&5%
5 lbs. and over.....80&10%
Masons'.
Single and Double Face.....80&5%

HANDLES.

Auger.
Common Assorted....per doz. $0 38
Peck's Adjustable.... " 2 10
Ives' Adjustable.....per set, 1 35
Axe.....60%
Chisel.
Hickory, Tanged Firmer, Assorted, 33c; Large, 38c per doz.
Hickory, Socket Firmer, Assorted, 27c; Large, 30c per doz.
Applewood, Tanged, Firmer, Assorted, 29c; Large, 38c per doz.
Applewood, Socket, Firmer, Assorted .....per doz $0 24
Coal Pick.....50&10%
Drifting Pick.....50&10%
File, assorted, 13c; Large, 16c per doz.
Hammer.
Adze Eye.....per doz. $0 40
Blacksmiths'..... " 40c@70c
Machinists'..... " 45c@70c
Hatchet..... " 40
Hay and Manure Fork.....30%
Hoe and Rake.....30%
Plain.....per doz. $0 75
Varnished..... " 80
Screw Driver.
Assorted..... " 37
Large..... " 48
Shovel and Spade.....33⅓%

HANGERS.

Barn Door.
Nansen.....60&10%
Matchless.....70&10%
Storm King.....60%
World's Best.....50%
Wagner's Adjustable.....70&10%
Warehouse.....60%
Conductor P.
Griffin.....70&10%
Iwan's Perfection.....50%
Eave Trough.
Baker's.....per gro. $2 35
Imperial.....20%
Wire.....33⅓%
Parlor Door.
Acme.....per set, $3 75
Ives' Improved..... " 2 50
Lane's Standard..... " 3 50
Lane's New Model.... " 3 10
Le Roy Noiseless..... " 4 00
Richards'.....40-10&5%

HASPS.

Hinge, Wrought.....40%
With Staples—See Staples.

HATCHETS.

Crown.....60-10&5%
Cast Claw.....per doz. $1 10@1 35
Cast Shingling.... " $0 85@1 10
Germantown.....30%

HAY KNIVES.

See Knives.

HAY RACK BRACKETS.

Wenzleman's No. 1.....per doz. $9 00
Wenzleman's No. 2..... " 9 00

HINGES.

Blind.
Clark's Gravity ... per doz. sets, 95c
Parker's.....65%
Shepherd's Noiseless, for Wood Casing.....per doz $1 05
Gate.
Clark's..... 1 2 3
Hgs & Ltch.. doz. $2.50 2.90 4.00
Hinges only... " 1.90 2.20
Latches only . " .70 .75
Knuckle.....per doz prs. $6 00
Leed's..... " sets 6 75
Superior..... " prs. 9 50
Spring.
American.....20%
Chicago.....25&5%
Columbia Dbl. Acting....40&10&5%
Gem.....25%
Ideal Detachable.....per gro. $11
Matchless.....30%
New Idea.....per gro. $8 00
Oxford.....20%
Wrought Iron
New Lists .....
McKinney
Light Strap Hinges.....60%
Heavy Strap Hinges.....65%
Light T Hinges.....55%
Heavy T Hinges.....45%
Extra Heavy T Hinges.....60%
Screw Hook and Strap.
6 to 12 in.....per 100 lbs. $3 75
14 to 20 in..... " " 3 65
22 to 36 in..... " " 3 40
Screw Hook and Eye.
⅜ in.....per 100 lbs. $6 75
½ in..... " " 7 75
⅝ in..... " " 9 75

HOES

Garden .....70&10%
Grub.
Extra.....70%
Hazel.....per doz. $5 00
Ladies' and Boys'.....75%
Mortar.....75&10%
Planter's Eye.....62½%
Weed.....75&15%

HOLLOW WARE—See Ware.

HOOKS.

And Eyes.
Brass.....50&10%
Iron.....65&10%
Awning.....per gro. $1 00
Belt.
Brown's.....70&5%
Jones'.....65&5%
Bench.
See Stops Bench.

Box.

Inch	6	8	10	12
Per doz	$1.35	1.65	1.75	2.30

Hymason & Beckley's..per doz. $2 50
(See Goods, Bright Wire.)

Bush.
Common Axe Handle. per doz. $7 00

Chain.

Inch	¼&5/16	⅜	7/16	½
Per 100	$7.60-8.10	9.75	11.50	12.60

Clothes Lines.
Japanned .....per doz 22c@24c
Galvanized..... " 40c

Coat and Hat
Cast Iron .... per gro. 72c@$1 50
Gem Wire.....70%

Conductor.
Malleable.....25%
Wrought.....20%

Corn.
Common, unpolished, per doz. $1 50
Little Giant..... " 3 25

Gate.
See Goods, Bright Wire.

Grass.

Common. Nos.	2	3	1
Per doz	$1.50	1.60	1.70

German.....per doz. 1 75
Little Giant..... " 2 75

Hammock.
With plate.....per doz. 50
With screw..... " 45

Lambrequin, or Drapery, per gro. .21c
Picture.....50%@50&10%
Potato and Manure.....70&12½%

Screw.
Brass.....80&5%
(See Goods, Bright Wire.)
Seat Spring.....per lb. 5½c

HOOPS, TUB.
Elastic ... per case of 2 doz.... $1 50

HOSE, GARDEN.

				Coupled per ft.
Heron, 3 ply-¾" guar. press			55 lbs.	7½c
Crane.. "	"	"	75 "	8½c
Falcon "	"	"	95 "	9½c
Eagle "	"	"	120 "	10½c
Condor "	"	"	150 "	11½c
High Test "	"	"	200 "	12½c

COTTON COV. RUBBER HOSE.

High Grade-¾"-guar. press.			400 lbs.	11½
Special "	"	"	300 "	9½c
Leader "	"	"	100 "	7½c

HUSKERS.

Boss.

Nos	B	BB	E	200
Per doz	$2.00	2.00	1.75	.80
Nos	L	PP	P	K
Per gro	$5.40	6.00	6.00	10.50
Nos		2000	3000	O
Per gro	$3.50	9.00	24.50	
Nos	60	59	64	68
Per doz	$2.15	2.15	.85	1.45

Brinkerhoff's.
Per gro.....$14 40

Clark's.

No	1	63	200	400
Per doz	$0.40	.75	.75	1.75
Nos	200s	40s	3s	4s
Per doz	$0.85	.50	1.25	1.25
Nos	A	AB		F
Per doz	$3.00	$4.25		$2.50

IRON.
See Metals.—First column.

IRONS.
Curling.
X.....per doz. $0 40
Y..... " 50
Z..... " 58
Jewel..... " 85
Imperial..... " 1 00
Pinking..... " 70
Plane.
Wood Bench.....20&5%
Sad.
Charcoal.....per doz. $11 00
Common, polished, per 100 lb. 4 50
Common, nickel plated, 5 25
Chinese Polishing.....per doz. 7 40
Laundry, No. 1..... " 5 75
Laundry, No. 2..... " 6 25
Mrs. Pott's,
No. 50 J, Enterprise, per set 93
No. 55 J, " " 90
No. 50 T, " " 1 00
No. 55 T, " " 96
Tailors' Sad.....per lb. 5½
Tailors' Geese..... " 5½
Tuyere.
Single Duck Nest.....per doz $5 25
Double Duck Nest . . " 6 25
Sutton.....each.... 2 60

JACKS.
Locomotive.....70%
Wagon.
Oliver,

Nos	0	00
Each	$0.60	$0.80

Standard.

Nos	1	2
Each	$0.60	1.00

Wilcox.

Nos	1	2	3
Each	$0.85	1.20	2.90

KETTLES.
Brass.....15%
Cauldron.....40&5%
Copper..... per lb., 27c
Maslin.....65%
Sugar.....50%

KNIVES.
Beet Topping.
Clyde, 9-in. Scimiter Blade, doz. $3 85
California..... 3 40
Cooper's Hoop.....15%
Corn.
Clipper.....per doz. $1 75
Disston's..... " 2 75
Earle's..... " 3 00
Woodford..... " 2 25
Drawing.
Standard.....70%
Adjustable.....15%
Barton's Carpenters' 10%
Folding Handle.....25&5%
Hay.
American, Sickle Edge...doz. $10 50
Canton, Sickle Edge..... " 8 25
Heath's..... " 8 00
Iwan's, Sickle Edge..... " 9 50
Iwan's, Impv'd Serrated . " 10 00
Lightn'g, Holt's Genuine. " 6 50
Lightning Pattern..... " 6 00
Wadsworth's Sp'r Point.. " 8 50
Hedge.
Challenge.....per doz. $6 00
Disston's..... " 3 75
Mincing.
Common, Single..... " 40
Common, Double..... " 50
Streeter, 4-Blade..... " 1 30
Streeter, 6-Blade..... " 2 00
Putty.
Common.....per doz. $0 60@1 00
Lander'r..... " 1 40@1 75
Scraping.
Beech Handle..... 75@1 00
Lander's..... 5 25@6 00

KNOBS.
Door.
Mineral.....per doz $0 80
Porcelain..... " 90
Jet..... " 90

LADDERS.
Common Long.
Per ft.....9c@14c
Extension.
Per ft.....14c
Step.
Common, per ft.....7½c
Common, with Shelf, add 10c.
Keystone.....15c
Triumph, per ft.....20c

LANTERNS.
Ball's Eye Police.
3 -in. Flash Light....per doz. $6 00
2¾-in. Regular..... " 4 90
3 -in. Regular..... " 5 50
Tubular.
Dietz & Hanes' . . ..net prices.

LEADERS, CATTLE.

Nos	1	2	3
Per doz	$0 55	.70	2.75

LEATHER, LACE.
Cut.....33⅓%
Sides.
Ex. Quality ..... per sq. ft., 27

LEATHERS, PUMP.
Valve and Plunger.....10%

LIFTERS.
Stove Cover.
Coppered.....per gro. 1 75@3 65
Ideal..... " 5 50
Alaska, Coppered " 4 00
Alaska, Nickeled. " 5 00
Transom.
Payson's.....80%

LINES.
Chalk.
Twisted in 20-ft. hanks.

Nos	4	6	7	8	9
Gross	$1.50	2 00	2 25	2 50	3 00

Twisted in 50-ft. balls.

Nos	1	2	3	4
Per doz	25c	30c	35c	41c

Braided in 20-ft. hanks.

Nos	0	1	2	3
Per doz	22c	25c	31c	35c

Mansons', in 100-ft. hanks...doz. 80c
Clothes.
60-ft. Jute.....per doz $0 95
72-ft. Jute..... " 1 15
60-ft. Sisal..... " 1 40
72-ft. Sisal..... " 2 15
50-ft. Cotton..... " 1 15
50-ft. Braided Cotton. " 25

LINING, STOVE.
In Bricks.....per crate, 42c

MACHINES.

Boring.	Without Augers	With Augers
Angular.....per doz.	3 00	4 40
Upright..... "	2 60	4 00

Leather Riveting.
Chicago, Pomeroy....per doz. $9 00
Excelsior..... " 2 00
Handy..... " 2 00
Little Giant..... " 3 00
Pony, Pomeroy..... " 7 20
Washing.
Winner.....per doz. 54 00
Keystone..... " 54 00
U. S. Steel..... " 60 00
Advance, f.o.b.Chicago " 24 50

MAIL BOXES.
See Boxes.

MALLETS.
Carpenters'.
Fibre Head, Small....per doz. $5 00
" " Medium. " 5 75
" " Large... " 7 00
Round Hickory..... " 2 25
" Lignumvitæ... " 4 00
Square Hickory..... " 2 25
" Lignumvitæ... " 4 50
Tinners'.
Applewood..... " 1 70
Hickory..... " 1.00@1 50
Hickory Sheet Iron... " 1 50

MATS
Door
National Rigid.....50, 10&5%
Acme Steel Flexible.....33⅓%
Stove.
No. 2.....per gro. $3 25
No. 1..... " 3 50
No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....per doz. 1 10
No. 2 Asbestos Toasters, with ring.....per doz. 60

MATTOCKS.
Plumbs.....65&10%
Extra.....60%

MAULS.

Iron, lbs	10	13	16	18
Per doz	$4.00	4.50	5.25	5.60
Wood face, lbs	10	12	14	
Per doz	$5.00	5.50	6.00	

Wood Choppers'.
Lake Super'r & Oregon Pat. 75&10%

MEASURES.

	½ pk.	1 pk.	bu.
Galvanized, per doz.	$2.25	3.00	3.85
Japanned . "	1.75	2.45	3.15

MICA.
First Quality.....40&5%
Second Quality.....50&5%

MILLS, COFFEE.
Enterprise.....25%
Parker.....40-12½&2½%
Arcade.....40-12½&2½%

MITRE BOXES.
See Boxes.

MOPS.
Erie..... per doz. $3 15
Handled Cotton.

Pounds	¾	1	1½	2
Per dozen	$2.00	2.35	2.65	3.25

MOWERS, LAWN.

Gladiator—B. B.			
Inches	16	18	20
Each	6.50	7.25	8.00
King Universal—B. B.			
Each	5.25	5.75	6 00
Inches	14	16	18
Big Giant	3.50	3.90	4.25
Little Giant	2.50	2.65	2.75

Philadelphia.
All Styles, except A & E, 60, 10&10%
Style A.....50&10%
Style E, High Wheel....60, 10&10%
Drexels.....40%
All Day .....Net Price

NAILS.
Cut Steel .....rates, $2 50
Cut Iron..... 2 60
Wire.
Small Lots..... $2 28
Carload Lots..... 2 18
Cement Coated..... 2 30
Horse Shoe.
Ausable.....55&5%
Capewell.....15%
Perfect.....55&5%
Putnam.....20&5%
Star.....35&5%
Clover Leaf .....per lb., net, 10½c
Picture.
Brass Heads.....25%
Brads.....85%
Furniture.....15%

NAIL PULLERS.
See Pullers.

NAIL SETS.
See Sets.

NETTING, POULTRY.
Galvanized beforeweaving .80,10&2½%
Galvanized after weaving.....80&7½%
Cut Pieces.....65&5%

NIPPERS.
End Cutting.

Stubb's Pattern. Inches	5½	6
Per dozen	$4.00	4.25

End and Diagonal Cutting.
Swedish Side.....75%
Utica Drop Forge & Tool Co....60%
Hoof.
Heller's.....40&10%
V. & B.....55&5%

NOZZLES.
Hose.
Genuine Gem.....per doz. $3 90
Magic..... " 3 60
Mystic..... " 3 00

NUTS, HOT PRESSED.
Square Blank.

In	¼	5/16	⅜	7/16	½	⅝
lb	9½c	8c	6½c	5½c	5½c	5c	4½c

Square Tapped.

In.	¼	5/16	⅜	7/16	½	⅝	¾
lb.	12½c	10½c	8c	7½c	6½c	6½c	6c

For 5-lb. boxes add ½c per lb. to above prices.

OILERS.
Chase Pattern.
Brass and Copper.....60%
Zinc.....60%
Engineers'.
Cannon.....55%
Tin .....per doz. $2 00@$2 25
Machine.
Common.....per doz. $0 58
Copper Plated Steel... " 1 00
Malleable Iron.....60, 10&5%
Japanned.....65@75c

OPENERS.
Box.

Inches	10	12	14
Flat.....per doz.	$2.85	3.60	4.15
Round.... "	2.10	2.25	2.75

Can.
Delmonico .....per doz $1 30
Never Slip..... " 65
Crate.
V. & B..... " 5 75

OUTFITS, COBBLING.
Combination.....per doz. 11 00
Economy..... " 4 65
Family..... " 9 75

PADLOCKS.
Standard Wrought.....75&5%
Champion.....50%
Eureka.....40, 10&5%
Yale.....60&5%

PAILS.
Cream.
14-qt., without gauge, per doz. $2 50
20-qt., " " " 3 00
20-qt., with gauge.... " 3 50
Sap.
10-qt., Galvanized, per 100....$13 00
12-qt., " " 14 50
14-qt., " " 16 25
16-qt., " " 17 75
10-qt.,IC Tin..... " 10 25
12-qt., " .... " 11 75
14-qt., " .... " 13 00
10-qt.,IX Tin.... " 12 75
12-qt., " .... " 16 00
14-qt., " .... " 17 00
Stock.

Galv'd, qts.	14	16	18	20
Per doz	$3.75	4.00	4.75	5.25

Water.

Galvanized... qts.	10	12	14
Per doz	$1.95	2.20	2.45

Wood.
Cable, 2-Hoop.....per doz. $1 70
Cable, 3-Hoop..... " 1 90
Cedar, 3-Hoop..... " 2 85
Standard, 2-Hoop.... " 1 60
Standard, 3-Hoop.... " 1 80

PANS
Dripping.....60&5%
Fry
Common .....75&10%
Acme 70%
Roasting.
Paxton,

Nos	1	2	3	4
Per doz	$4.75	5.75	6.50	7.50
Neverburn	4.00	4.50	5.50	6.00

Savory, No. 200.....per doz. $8.00

PAPER.
Building.
Plain.....per 100 lbs. $1 25
Tarred..... " 1 35
Tarred Felt..... " 1 65
No. 20, Red Rosin....per roll, 40
No. 30, Red Rosin.... " 55
Sand and Emery.
Star ..... low list, 50%
B. & A.....50%
Wrapping.
Drab Fiber.....per lb. $0 06
Manila..... " 0 00

PARERS.

Apple.
Bay State.....per doz. $13 00
Turntable..... " 0 00
White Mountain..... " 5 00
Reading..... " 7 00
Potato.
Goodsell's Saratoga, 10½ in., doz. 6 50
Goodsell's Saratoga, 5 in., doz. 5 50

PICKS.

Adze Eye Ore.....70%
Drifting and Poll Picks.....70%
Plumbs, Railroad.....70%
Surface.....70%

PINCERS.

Carpenters', cast steel.

Inches.....	6	8	10	12
Per doz.....	$2.00	2.60	2.95	3.75

Blacksmiths'.....45%
Heller's.....40%

PINS.

Clothes.
Common.....per box of 5 gro $0 52
Hoyt's..... " " 31
U. S..... " " 70
Picket.
Fluted, 15-in.....per doz. $0 70
Fluted, 21-in..... " 1 60
Spiral..... " 1 90

PIPE.

Conductor.

	Gal. Steel	Charcoal
L. C. L. to Dealers:—		
Eastern	.....70&10%	...50&10&2½%
Pittsburgh	..75&10&5%	.....60%
Central	.....75&10%	.....60%
Northwestern	..75&7½%	.....60%
Western	.....70&12½%	.....50&12½%
Tennessee	....70&10%	.....50&12½%
Southern	.....70%	.....50&12½%
Southwestern	....70%	.....50&5%

Terms 60 days; 2% Cash 10 days.
Factory shipments generally delivered

Lead.
Full coils .....per lb. 7½c
Cut coils..... " 7¾c
Stove

Acme—Inches....	5	6	7
Smooth, per jt..	8½c	9½c	10½c
Planished, "	32 c	33 c	43 c
Peerless—Smooth,	7½c	8 c	9½c
Polished	14½c	15½c	18 c
Planished	28 c	31 c	35½c
Made-up—Inches..	5	6	7
Smooth	7½c	8 c	9½c

7 to 6 in. Smooth Tapers, pr jt. .13c
6 in. Smooth T's..... " 27c
7 to 6 in. Planished Tapers.....45c

Yale Patent Lock Pipe—Stove.

	5"	6"	7"	7" to 8"
Blue Steel:	—Cents—			
Battle Axe Blue..	7	7½	9½	10½
Can't Slip " ..	7½	8½	10	11
Peerless " ..	7½	8½	10	11
Duplex " ..	10	11	13	14
Yale, Rus. Fin....	15	16	17	18
Duplex Planished.	29	31	37	38
Galvano, Gal.....	15	16	17	18

If wanted made up, add per joint or grooved, 1c; riveted, 1½c. Grating made-up pipe extra.

Wrought Iron Gas Pipe.
⅛@⅜-in., black.....discount, 60%
⅜@½-in., black..... " 60,10&5%
¾-in. to 6-in., black... " 70%
7-in. to 12-in., black... " 62½%
⅛@⅜-in., galvanized.... " 42%
⅜@½-in., galvanized.... " 50%
¾-in. to 6-in., galvan'd " 57½%
7-in. to 12-in., galvan'd " 45%

PLANES.

Sargent Iron Bench.....60%
Stanley Iron Bench .....25&5%

PLATES, TIN.

See Metals in Column 1.

PLIERS.

Button's—Ins.. 4½ 6 8 10
Per doz..... $2.75 3.35 4.15 5.15
Button's Pattern.

Inches.....	4½	6	8	10
Per doz.....	$2.25	2.75	3.25	4.25

Cutting.
Bernard's.....30%
Lodi.....50%
End and Diagonal Cutting
Swedish Side.....70%
Utica Drop Forge & Tool Co....50%
Fencing.
Farmers' Choice.....per doz. $8 00
Russell's..... " 8 25
Flat and Round Nose.
Bernard's.....30%
German.....65%
Lodi.....50%
Paragon.....50%
Gas.—Inches.. 7 8 10 12
Prices..... $3.00 3.50 4.50 5.50

Tinners'.
Hollow.....40%
Solid.....each, 5½c

PLUMBS AND LEVELS

Common .....60&10&10%
Cook's.....40%
Davis' Iron 25%
Davis' Inclinometer.....15%

POINTS

Drive Well Points.....75&5%

POKERS, STOVE.

Wr't Steel, str't or bent, per doz. $0 55
Wr't Steel, wood hand'ls " 80
Nickel Plated, coil hand'ls " 65

POKES, ANIMAL.

Cracker Jack, wr't steel, per doz. $4 50

POLISH.

Metal.
A-B Oil Metal Polish, 4-oz. bottles, 3 doz. case, per gr. $9 00
1-gal. can..... 90
White Silk, half pints, per doz, $2 00
White Silk, 6-oz. cans, per doz. 1 00
Shoe.
M. C. D.....per doz.....36c@50c
F. C. O..... " 40c
T M..... " .55c@$1 75
Imperial.....per gro 5 00
Stove.
A-B Polishes.
Liquid Stove Polish.
3 doz. in case..... $2 25
6 " " .....gr., 9 00
Fireproof Stove Polish, 3 and 6 doz. in case.....gr., 12 00
Liquid Waterproof Stove Polish, 10-oz. cans, per gro., 12 00
Oil Paste Polish.
6-oz. cans, 3 doz. case..... 2 25
1-lb. " 3 " " 3 75
5-lb. " per can..... 50
Dry Powdered Stove Polish.
5-lb. box..... 75
100-lb. bbls.....per lb. 12
Powder Polish. 3 doz. 6 do. 12 doz.
$2 25 $4.50 $9 00
Water Paste Stove Polish, ¼-lb. boxes, 3 doz. case..per gro., 12 00
Black Eagle, 1-lb. cans, pr gr, $15 00
Black Silk—
5-lb. pail..... $0 70
Paste, 5-oz. cans....per doz. 75
Paste, ½-lb. cans.... " 1 05
Liquid, ½-pt. cans... " 1 05
Liquid, 6-oz. cans... " 75
Black Jack, ¼-lb. cans. " 9 25
Dixon's Carb. of Iron. " 5 75
Nickel Plate..... " 4 50

POPPERS, CORN.

Round or Square, 1-qt. per doz. $1 05
Square, 1½-qt..... " 1 15
Square, 2-qt..... " 1 35
4-qt..... " 3 75

POTS, FIRE.

Clayton & Lambert's, each, $4 75@6 25
Gate City.....each, 6 25
Gem.....each, $6 75@8 50

POWDER.

See Ammunition.

PRESSES, FRUIT AND JELLY.

Enterprise Manufacturing Co.....25%

PRIMERS

See Ammunition.

PRUNERS.

Disston's Pole.....per doz. $6 50
Henry's Improved..... " 75&10%
Water's Improved..... " 80%

PULLERS.

Cork.
Daisy..... each, $3 10
Phœnix..... " 1 40
Quick and Easy..... " 2 70
Nail.
Giant.....per doz. 10 50
Giant Pattern..... " 6 00
Jumbo..... " 9 00
Tack—Giant..... " 40

PULLEYS.

Awning—Jap'd.....60%
Clothes Line.....50&10%
Hay Fork.
Iron Wheel, 5-in.....per doz. $1 75
Wood Wheel, 6-in.... " 1 75
Wood Wheel, 6-in., pass knot, ... per doz. 2 15
Hot House—Jap'd.....50&10%
Screw—Jap'd.....60%
Side—Jap'd.....50&10%
Sash.
Common.....per doz. $0 20
Common-Sense, 2-in.. " 20
Empire Pattern, 2-in.. " 20
Ideal..... " 20
Steel..... " 25

PUMPS.

Pitcher Spout.

Nos.....	1	2	3	4
Each.....	$1.00	1.15	1.30	1 70

Spray.
Blizzard.....per doz. $14 50
Cyclone, tin..... " 3 40
Cyclone, copper..... " 6 75
Daisy..... " 9 00
Little Giant.....each,... 2 25

PUNCHES.

Conductors'.
No 22.....per doz $2 25
Machine.....per lb 19
Saddlers'.
Common .....per doz 60c@70c
Good..... " 72c@84c

PUTTY.

In Bladders.
Strictly pure.....per 100 lbs. 2 35

RAIL.

Barn Door.
Matchless, 1-in..... 3 c
Matchless, 1¼-in..... 3½c
Storm King..... 4 c
Sliding Door.
Painted steel.....per ft. 4½c
Bronzed wrought iron...per ft. 8½c

RAKES.

Coal or Wood.....per doz. $5 20
Garden.
Steel.....70%
Steel, bow.....70%
Malleable iron, heavy.....60&10%
Hay.
Wood.....$1 50@$2 00
Lawn—Wood.
XXX.....per doz. $3 00
Automatic..... " 5 25
Lawn Queen..... " 2 75
Jumbo, 36 teeth ..... " 5 25

RASPS—See Files.

RAZORS.

Bo-ras-ic.....50%
Red Devil.....50%
Tree Brand.....50%

REGISTERS.

List December 5, 1904.
Black and White Japanned, Reg. and Border 70%
On Face .....75&10%

RINGS.

Bull.

Copper.....	2½ in.	3in.
Per doz.....	$1 10	$1 40
Rea's Improved Self-Piercing copper, pr doz	2 00	....
Steel, per doz.....	85	95
Nickel plated.....	1 35	....

and Ringers—Hog.
Blair's Rings.....per doz. $0 58
Blair's Ringers..... " 75
Brown's Rings..... " 50
Brown's Ringers..... " 80
Champion Ringers.... " 1 00
Hill's Ringers..... " 70
Hill's Ring, boxes.... " 47
Major Rings..... " 60
Perfect Ringers..... " 95
Wolverine Rings..... " 1 40
Wolverine Ringers.... " 80
Fruit Jar.
White.....per lb.....30c
Key.
Split, round.....per doz. $0 17
Split, square..... " 32
Ball, round..... " 32

RIVETS.

and Burrs.
Copper Belt.....40%
Coppered Iron.....60&10&5%
Tinners'.....60&10%
Hame.....per lb. $0 10
Slotted Clinch per doz 40c@45c
Tubular
Nos 1 and 2 assorted sizes, doz, 45c

RIVET SETS

See Sets.

ROPE.

Cotton.
¼, 5-16 in. Com on reels. .per lb. 11½c
¼, 5-16 in Com. in coils.. " 12 c
¼, 5-16 Imperial in coils.. " 21 c
Sisal
1st Quality .....12 c
Hardware Grade, rates, per lb...10 c
Pure Manila.
1st quality.....per lb. 15½c
Hardware Grade, rates... " 14½c

RULES.

Boxwood.....[illegible]
Ivory.....

SASH WEIGHTS.

See Weights.

SAWS.

Back.
Disston's.....25%
Jackson's.....25%
Butchers'.
Disston's.....30%
Circular.
Disston's.....50%
Hiles'.....50&10%
Compass.
Common.....per doz $1 35@1 60
Disston's .....%28
Cross-Cut
Disston's.....45%
Dehorning.
Disston's.....per doz. $5 70
Hack.
Disston's.....25%
Keystone.....30%
Hand and Rip.
Brown's.....30%
Disston's No. 7.....30%
Disston's Nos 8, D8, 12, 76, 112, D100, and 120 (new list).....25%
Keystone.....30%
Enterprize, hand.....per doz. $5 00
Our Saw, hand..... " 4 00
Our Saw, rip..... " 4 50
Keyhole—Disston's.....25%
Kitchen.
Sterling 25%
One Man.....50%
Panel
Brown's 30%
Disston's No. 7.....30%
Disston's No. D100.....25%
Pruning.
Brown's 25%
Disston's 25%
Wood
Common.....per doz. $4 50
Clover Leaf..... " 6 00

SAW BUCKS—See Bucks

SAW SETS—See Sets

SAW TOOLS—See Tools

SAW FRAMES.

Common, plain.....per doz $1 20
Common, painted..... " 1 70

SCALES.

Counter.
Pelouze.....40&10%
Platform.
Osgood.....50%

SCOOPS.

Grain.
½-bu. "Hercules".....per doz. 13 70
1-bu "Hercules"..... " 15 00

SCRAPERS.

Box.
Triangular.....per doz. $4 00
Cabinet.
Cast Steel .....per doz. 40c@75c
Road

Cubic ft.	7	5	3
Without run's, ea.	$4.00	3.75	3.50
With runners, ea..	4.25	4.00	3.75

SCREWS

Bench

Iron, in.....	1	1½	1¾
	$3.50	4.00	4.75

Wood, white maple...per doz. $3 50
Hand—Wood.....10%
Hand Rail.....80&10%
Jack.....70&10&5%
Lag or Coach—all sizes, gimlet pointed.....75&5%
Saw—Centennial

Nos ..	1	2	3	4	5	6
Per doz	18c	20c	26c	30c	23c	25c

Wood.
F. H. Bright.....87½&5%
R. H. Blued.....85%
F. H. Jap'd.....82½%
F. H. Brass.....85%
R. H. Brass.....80%
R. H. Nickel Plated.....75-10%

SCYTHES.

Be Ve Be, grass.....per doz. $8 50
Clipper, grass..... " 8 00
Clover Leaf Dutchman. " 8 00
Honest Dutchman..... " 8 00
Be Ve Be..... " 8 00

SHAVING SETS.

Smith & Hemenway.....60%

SETS.

Nail.
Round, common.....per doz. $0 3
Square, common..... " 4
Octagon, common.... " 3
No. 5, square..... " 7
Cup point, knurled... " 7

Rivet.
Farmers'.....per doz. $1 2
Tinners'.....50&10%

Saw.
Aiken's Pattern.....per doz $3 5
Common Lever..... " 1 2
Disston's Monarch.... " 6 5
Disston's X Cut ..... " 12 0
German..... " 1 0
Morrill's Old Style.... " 5 00
Morrill's Pattern..... " 3 25
Leach's..... " 80
Nash's Hand..... " 3 15
Nash's X Cut..... " 4 20
Stillman's Lever..... " 1 30
Stillman's X Cut..... " 2 50

SHARPENERS, SKATE.

Diamond..... per doz $1 60
Smith & Hemenway 20%

SHAVES, SPOKE

Iron.....per doz $1 10@1 85
Wood ..... " 2 75@4 75
Bailey's .....50&5%
Goodell's 15%

SHEARS

Pruning
Buckeye, No. 1.....per doz $5 75
Buckeye, No. 2..... " 7 40
California Pat., 9-in.. " 3 20
Cailfornia Pat., 10-in.. " 4 00
Draw Cut, No. 3..... " 13 75
Draw Cut, No. 4..... " 16 50
Henry's Pat. 0 01 14 012
Per doz.....$1.40 2.10 2.90 2.80
Star.....per doz $4 00

Sheep—No BBA.
Inches..... 6 6½ 7
Reg. Grip.....$11.25 11.50 12.00
Nar. Grip.,doz.... 11.00 11.25 12.25

Tinners'—See Snips.

SHEAVES, SLIDING DOOR.

Common.
Inches..... 3 4 5
Per set..... $0.34 .42 .70

Hatfield's.
Per set..... $0.75 1.00 1.60

SHELLS—See Ammunition.

SHELLERS, CORN.

Union.....per doz. $6 75

SHIELDS.

Expansion Bolt Shields.....50&10%

SHOES.

Conductor.....60&10%

SHOE POLISH—See Polish.

SHOT—See Ammunition.

SHOVELS AND SPADES.

Coal.
No 2 Woodford.....per doz. $5 50
No. 1&2..... " 6 00
Ames' new list .....Discount, 12½%
Per doz.
Neverbreak, hollow bck, blk. $15 75
National.... " " " 14 75
Buckeye.... " " " 10 00
Mohawk.... " " " 9 00

Drain.
Iwan's Perfection.....50%

Railroad, etc.
Black Diamond.....per doz. $1 50
Crescent..... " 5 75
Keystone..... " 8 75
Star..... " 4 75
Vaterland..... " 9 50
Hollow Back..... " 4 75
Ames, new list.....Discount, 12½%

Snow.
Per doz.....$1.65@$9.00

Alaska Steel.
D Handle.....per doz. $3 50
Long Handle..... " 3 00

SINKS.

Cast Iron.
Painted.....50&10%
Enameled, White.....50&10%

Wrought Steel.
Painted, new list.....40-10&5%

SLEDGES—See Hammers.

SNAPS, HARNESS.

Champion.....33⅓%
German Pattern.....30&5%
Judd's Pattern.....50%

SNATHS.

Double Ring, Bush.....per doz. $6 00
Patent Loop, Bush..... " 5 75
Patent Loop, Grass..... " 5 50

SNIPS, TINNERS'.

Clover Leaf.....40&10%
National.....40&10%

SOLDER—See Metals.

SPRINGS, DOOR.

Perfect.
Nos..... 1 2 3 4
Per doz.....30c 35c 40c 54c

Reliance.
Per doz ... light, $1.25; heavy, $2 50

Star.
Per doz .... light, 90c; heavy, $1 35
Torrey's.....per doz. $1 35
Warner's No..... 11 13
Per doz..... 75c $1 35

SQUARES.

Steel and Iron.....70&10%
(Add for bluing, $2.50 per doz., net.)
Miter.
Try.
Try and Bevel.
Try and Miter.
Fox's.....per doz. $5 75
Winterbottom's.....70%

SQUEEZERS, LEMON.

Common Wood.....per doz. $0 70
Porcelain Lined, Wood.. " 1 25
Boss, malleable iron.... " 1 20
Iron Frame, porc'n bowl " 1 90
Iron Frame, glass bowl . " 2 35
Little Giant, tin'd iron . " 4 00
Drum, japanned..... " 3 60
Drum, nickel plated ... " 4 50

STAPLES

Blind.
Barbed.....per lb . . .9¼@9½c
Butter Tub..... " .....8 @8½c
Fence—less than carload.
Polished.....per 100 lbs. $2 30
Galvanized..... " 2 60
Netting.
Galvanized.....per 100 lbs. 4 00
Wrought.
Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples.....80-10&10%
Extra heavy.....75&10%

STEELYARD.

Discount 25%.

STONES.

Axe.
Hindostan.....per lb 5¾@7 c
More Grit..... " 9½c
Washita ..... " 17 c
Emery.....60%@60&5%
Oil—Mounted.
Arkansas Hard.....per doz.$23 00
Arkansas Soft..... " 15 50
Hindostan .....per lb 6½@6¾
Oil—Unmounted.
Arkansas Hard.....per lb $2 05
Arkansas Soft ..... " 1 10
Lily White..... " 45
Queer Creek..... " 15
Ouachita..... " 38
Washita..... " 26
Sythe.
Black Diamond.....per gro. $8 00
Crescent..... " 4 25
Gem Corundum..... " 7 50
Green Mountain..... " 4 50
La Moille ..... " 7 00
Quinnebog..... " 5 00
Red End ..... " 3 75

STOPS, BENCH.

Hotchkiss'.....per doz. $3 50
Stearns'..... " 4 75

STOPPERS, FLUE.

Common.....per doz. $0 40
Crown..... " 45
Gem, flat, painted..... " 85
Gem, cor'd, decorated... " 70
Kirch's..... " 90
Perfect..... " 70@85
Skinner's Common Sense " 80

STOVE PIPE—See Pipe.

STOVE BOARDS—See Boards

STOVE POLISH—See Polish.

STRAPS.

Scoop.....per doz prs., $1 85
Skate..... " " 60@70c

STRETCHERS.

Carpet.
Bullard's.....per doz. $3 90
Excelsior..... " 5 25
Malleable Iron..... " 70
Perfection..... " 6 30
King..... " 4 50

Wire.
N. S. Elwood's.....per doz. $6 00
O. S. Elwood's..... " 6 00
Little Giant..... " 5 75
Safety..... " 10 00
Star Lever..... " 6 25
Canton Tackle Block. " 9 50
Warner's ..... " 6 25

SWIVELS.

Malleable Iron.....per lb. $0 70
Wrought Steel.....per gro. 4 50

TACKS.

American Cut.....90&15%
American Wire.....85&20%
Bill Posters Cut.....90&20%
Blued Carpet.....90&10%
Tinned Carpet.....90&10%
Gimp.....90&10%
Upholsters' Cut.....90&20%
Upholsters' Wire.....90&10%
Double Pointed.....90%
Copper.....per lb. 32c
Canvas Nails.....75&5%
Clout Nails.....75&10%
Hungarian Nails.....80%

TAPES, MEASURING.

Asses' Skin.....40&10%
Bend Leather.....20%
Patent Leather.....20%
Lufkin's Steel.....25%
Lufkin's Metallic.....30%

TEE BEVELS—See Bevels.

THERMOMETERS.

Tin Case.....per doz. 80c@$1 25
Wood Back..... " $2.00@12 00
Glass..... " 12 00

TIES.

Bale.
Single Loop.....80&5%
All other kinds.....70%

Cow—See "Chains."

TOOLS, SAW.

Disston's Universal.....40%

Miniature.
Smith & Hemenway.....25%

TRAPS.

Fly.
Ballon.....per doz. $1 25
Harper's..... " 1 35

Game.
Newhouse.....40&10%
New Victor.....70&10%

Mole.
Reddick's.....per doz. $6 00

Mouse and Rat.
Wood Choker ..per doz. holes $0 13
Tin Choker..... " " 75
Delusion.....per doz. 1 15
Marty Rat..... " 6 25
Marty Rat Imitation. " 3 50
Marty Mouse..... " 3 00
Marty Mouse Imitation " 2 00
Hold-em, wire rat.... " 3 75

TROWELS.

Brick.
Glover Leaf.....30%
Brade's.....15&5%
Disston's.....30%
Rose's.....20%

Plasterers'.
Clover Leaf.....40%
Disston's.....25%
W. & McP.....25%

TRUCKS.

Bag.....each, $2 75
Handy..... " 1 85
Warehouse.....50&10%
No..... 1 2 3
Half Ironed..... $3.00 3.85 5.50
Full Ironed..... 3.45 4.50 6.45

TUBS, WASH

Standard, Wood Ex.
Nos..... 0 2 1 large
Per doz.....$5.00 6.00 7.00 9.50

Dowell.
Per doz..... 5.35 6.35 7.00 9.50

Cedar.
Per doz..... 6.10 7.10 7.90 10.80

Indurated.
Per doz..... 8.55 9.45 10.80 13.50

Galvanized.
No..... 1 2 3
Per doz.....$6.00 6.75 7.75

TWINE.

Per lb.
3-ply Cotton Wrapping 25c
4 " " " 25c
" " Extra Wrapping.....27c
4 " " " Hvy. Wrapping 25c
4 " " Wrapping on tubes....27c
3 " " " " cones.....25c
4 " " " " " 25c
India Hemp, ½-lb. balls 19c
" " ½-lb. " 18c
" " ¼-lb. " .....doz. 75c
2-ply Jute, ½-lb. " 14c
3-ply Jute, ½-lb. " 13c
Jute Wrapping, ½-lb. balls.....14c
Jute Wool, 1-lb. balls.....9½c

Seins.
Nos..... 9 12 15
Soft.....per lb 26½ 26 25
Med..... " 26½ 26 25
Hard..... " 27 26½ 26
Staging, ½-lb. ball, size 21.....26½c
" " " " 24.....26c
" " " " 27.....26c
Bagging " " 28c
3-ply "B" in hanks 18c
4- " "B" " 18c
3 " "A" " 27c
3 " Silver Finish, in hanks...37c

Fodder or Lath.
130 strand.....6½c
200 strand.....—

VISES.

Phœnix.....30%
Phœnix Oval Slide.
Inches..... 2½ 3 3½ 4½
Each..... $1.25 1.50 1.85 2.75
Parker's Parallel.....18&20%
Parker's Victor.....15%
Parker's Combination.....75%
Solid Box.....40&5%
Adams' Mechanics'.....each 2 50
Williamson's Universal.....60%

WARE.

Stove Hollow Ware.
Plain or Unground.....50%
Ground Ware.....45%
Enameled Ware.....33⅓%
Country Hollow Ware, per 100 lbs. $3 00
White Enameled Ware.
Maslin Kettles.....60&10%
Covered Ware.
Tin'd and Turn'd.....35&10%
Enameled.....45&10%
Glue Pots,
Tinned.....25%
Enameled.....30%
Enameled.
Cherry Blossom and Chrysolite..50%

WASH BOARDS—See Boards.

WASHERS.

Standard O G. cast iron . . .per lb. 2½c
Wrought iron in bulk, per lb :
In. ½ ⅝ ¾ ⅞ 1 1¼ 1½
9c 6½c 5c 4½c 4¼c 4¼c 3½c
Wrought steel in 5-lb. boxes, per lb.:
In. ½ ⅝ ¾ ⅞ 1 1¼ 1½
10c 7c 6c 5½c 5c 5c 4½c

WASHING MACHINES—See Machines.

WEDGES.

Ax.....per doz. $0 30
Galling.....per lb. 10¾
Saw..... " 8¾

WEANERS.

Calf.
Fuller's, per doz..... $2 00 to $2 50
Tyler's Safety, per doz 1 85 to 2 40
Carroll's, per doz..... 3 00 to 3 75
Standard, per doz..... 3 00
Hoosier, per doz..... 3 50 to 4 60

WEIGHTS.

Hitching.....per lb. 2½c
Sash—f.o.b. Chicago....pr ton, 26 50

WHEEL BARROWS.

Common Railroad.....per doz. $17 00
Heavy Railroad..... " 24 00
Panama Steel Tray.... " 39 00
Klondike Steel Tray.. " 28 00

WHEEL BARROWS.

Common Railroad.....per doz. $17 00
Heavy Railroad..... " 24 00
Panama Steel Tray.... " 39 00
Klondike Steel Tray.. " 28 00

WHEELS.

Corundum.....70&10&5%
Emery.....75&5%
Well. Inches.. 8 10 12 14
Per doz..... $2.40 3.25 4.00 6.00

WIRE.

Barbed. Painted. Galv'd
Carloads . . per 100 lbs. $2.33 $2.63
Less than car " 2.43 2.73
Brass.
In coils.....20%
In 1-lb. spools, new list.....50%
Broom—Tinned . . . 60&10&10&10%
Cable—Same price as Barbed Wire.
Copper.
In coils.....20&10%33⅓%
1-lb. spools, new list.....50&10%
Fence—Smooth.
Nos. 6 to 9, An'eal'd, pr 100 lbs. $2 30
Nos. 6 to 9, Galv'd.. " 2 60
Hair—New List.....50%
Market.
Bright, full bdles.....70&5%
Bright, broken bdles.....70%
Coppered, full bdles.....70%
Coppered, broken bdles.....65&10%
Tinned, full bdles.....75&5%
Tinned, broken bdles.....65&10%
Picture—In coils . . . . 80% @80&10%
In 5-lb. spools.....per lb.....26c
Plain—Small lots..... $2 10
Car lots..... 2 05
Small spools 5c per 100 higher.

WRENCHES.

Acme Standard.....60%
Alligator No. 1.....85cnet
Always Ready..... 50%
Coe's Standard.....40&10&5%
Agricultural.....75&5%
Ellis Adjustable.....25%
Malleable "S".....per lb. 08c
Malleable..... " 08c
Stillson Pipe.....70%

WRINGERS.

No. 22, Guarantee....per doz, $32 50
No. 110, Guarantee.... " 32 50
No. 110, Brighton.... " 23 50
No. 110, Bicycle..... " 31 50
No. 500, Royal..... " 32 50
No. 350, Universal..... " 28 00
No. 300, Novelty..... " 28 00
No. 310, Keystone..... " 28 00
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Berger Mfg. Co., Canton, O
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Canton Mfg. Co., Canton, O
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Delphos Mfg. Co., Delphos, Ohio
Eller Mfg. Co., Canton, O
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Foy, Edw. A. & Co., Cincinnati, O
Maher & Son Lightning Rod Co., Preston, Ia

Mantles—Alcohol
Cohn & Co., G., New York, N. Y
Thurnauer, Otto, New York, N. Y

Metal—Perforated
Harrington & King Perforating Co., Chicago, Ill

Metal Polish
A-B Polish Co., Chicago, Ill
Nickle Plate Stove Polish Co., Chicago, Ill

Metal Shingles
Burton, W. J. Co., Detroit, Mich
Canton Art Metal Co., Canton, O
Cortright Metal Roofing Co., Philadelphia and Chicago
Nat'l Sheet Metal Roofing Co., Jersey City, N. J

Mica
Munsell & Co., Eugene Chicago, Ill

Miters
Whitacre, J. E. Mfg. Co., Rockford, Ill

Nails and Tacks—Copper
Hungerford, U. T., Brass & Copper Co., New York, N. Y
Hussey & Co., C. G., Pittsburg, Pa

Nuts
Columbus Bolt Works, Columbus, O

Paints and Paint Specialties
Buckeye Paint & Varn. Co., Toledo, O
Connors, Wm., Paint Mfg. Co., Troy, N. Y
Dixon, Jos. Crucible Co., Jersey City, N. J

Pencils
Dixon, Jos. Crucible Co., Jersey City N. J

Perforated Metal
Harrington & King Perforating Co., Chicago, Ill

Pipe—Furnace
Michigan Safety Furnace Pipe Co., The Detroit, Mich

Plungers
Berger Bros. Co., Philadelphia Pa

Pumps
Star Bucket Pump Co., St. Louis, Mo

Punches
Armstrong-Blum Mfg. Co., Chicago, Ill
Bertsch & Co., Cambridge City, Ind
Niagara Machine & Tool Works, Buffalo, N. Y
Robinson, Mfg. Co., J. M., Cincinnati, O

Putty—Stove
Connors, Wm. Paint Mfg. Co., Troy, N. Y

Rasps
Disston, Henry & Sons, Philadelphia, Pa
Carver File Wks., Philadelphia, Pa

Razors
Droescher, S. R., New York, N. Y
Smith & Hemenway Co., New York, N. Y

Registers
Ferrosteel Co., Cleveland, O
Henry & Scheible Co., Cleveland, O
Mueller, L. J., Furn. Co., Milwaukee, Wis
Schwab & Sons Co., Milwaukee, Wis

Rivets
Columbus Bolt Works, Columbus, O
Hungerford, U. T., Brass & Copper Co., New York, N. Y

Roasters
Wheeling Corrugating Co., Wheeling, W. Va

Roofers' Supplies
Auld & Conger Co., Cleveland, O

Roofing—Iron and Steel
American Rolling Mills Co., Middletown, O
American Sheet & Tin Plate Co. Pittsburgh, Pa
Berger Mfg. Co., Canton, O
Burton, W. J. Co., Detroit, Mich
Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Delphos Mfg. Co., Delphos, Ohio
Eagle Cornice & Sheet Metal Works Tampa, Fla
Eller Mfg. Co., Canton, O
Follansbee Bros. Co., Pittsburgh, Pa
Friedley & Voshardt, Chicago, Ill
La Crosse Steel Roof. Co., La Crosse, Wis
Nat'l Sheet Metal Roof. Co., Jersey City, N. J
Schoedinger, F. O., Columbus, O
Sykes Steel Roofing Co., Chicago, Ill
Tanner & Co. Indianapolis, Ind
Wheeling Corrugating Co., Wheeling, W. Va

Roofing Cement
Auld & Conger Co., Cleveland, O
Connors Paint Co., The Wm., Troy, N. Y

Roof Paint
Dixon, Jos. Crucible Co., Jersey City, N. J

Rules
Lufkin Rule Co., Saginaw, Mich

Sash Balances
Pullman Mfg. Co., Rochester, N. Y

Sausage Stuffers
Enterprise Mfg. Co. of Pa. Philadelphia, Pa

Saw Sets and Saws
Disston, Henry & Sons, Philadelphia, Pa
Smith & Hemenway Co., New York, N. Y

Schools—For Sheet Metal Pattern Drafting
Gray's School, New York, N. Y

Screens—Perforated Metal
Harrington & King Perforating Co., Chicago, Ill

Screen Door Checks
Pullman Mfg. Co., Rochester, N. Y

Screws
Columbus Bolt Works, Columbus, O

Screw Drivers
North Bros. Mfg. Co., Philadelphia, Pa

Seamless Tubing—Brass & Copper
Hungerford, U. T., Brass & Copper Co., New York, N. Y

Shears
Bertsch & Co., Cambridge City, Ind
Niagara Machine & Tool Works, Buffalo, N. Y
Robinson, Mfg Co., J. M., Cincinnati, O
Simmons Hdw. Co., St. Louis, Mo

Sheets—Black and Galvanized
American Rolling Mills Co. Middleton, Ohio
American Sheet & Tin Plate Co. Pittsburgh, Pa
Berger Mfg. Co., Canton, O
Tanner & Co., Indianapolis, Ind
Wheeling Corrugat'g Co., Wheeling, W. Va

Sheets—Ingot Iron
American Rolling Mills Co. Middleton, Ohio

Sheets—Planished
American Sheet & Tin Plate Co., Pittsburgh, Pa
Follansbee Bros., Pittsburg, Pa
Ward-Dickey Steel Co., Indiana Harbor, Ind

Sheets—Steel
American Sheet & Tin Plate Co., Pittsburgh, Pa.
American Steel & Wire Co., Chicago, Ill
Follansbee Bros. Co., Pittsburgh, Pa
Sykes Steel Roofing Co., Chicago, Ill
Tanner & Co., Indianapolis, Ind

Sheet Metal Ornaments
Berger Mfg. Co., Canton, O
Foster, & Sons Co., Wm. Springfield, Ill
Friedley-Voshardt Co., Chicago, Ill
Gerock Bros. Mfg. Co., St. Louis, Mo
Keighley Metal Ceiling Co., Pittsburg, Pa
La Crosse Steel Roofing and Corrugating Co., La Crosse, Wis
Milwaukee Corrugating Co., Milwaukee, Wis

Shelf Boxes
Green & Co., A. H., New York, N. Y

Shelving
Warren Mfg. Co., J. D., Chicago, Ill

Shovels
Avery Stamping Co., Cleveland, O

Shutters—Fireproof
Eagle Cornice & Sheet Metal Works Tampa, Fla

Siding
Foster, Wm. & Sons Co., Springfield, Ill
Milwaukee Corrugating Co., Milwaukee, Wis

Sifters
Stuber & Kuck, Peoria, Ill

Skylights
Berger Mfg. Co., Canton, O
Burt Mfg. Co., Akron, Ohio
Canton Art Metal Co., Canton, O
Eagle Cornice & Sheet Metal Works Tampa, Fla
Eller Mfg. Co. Canton, O
Powers & Williams, Streator, Ill
Sykes Steel Roofing Co., Chicago, Ill

Skylight Gearing
Sykes Steel Roofing Co., Chicago, Ill
Weiss, H. & Co., New York, N. Y

Slate Roofing
Auld & Conger Co., Cleveland, O

Slating Nails
Hussey & Co., C. G., Pittsburg, Pa

Soldering Flues
Ruby Chemical Co., Johnston, Ohio

Squares, Machinists'
Disston, Henry & Sons, Philadelphia, Pa

Stampings—Sheet Metal
Avery Stamping Co., Cleveland, O

Statuary
Gerock Bros. Mfg. Co., St. Louis, Mo

Steel
American Steel & Wire Co., Chicago, Ill

Stoves and Ranges
Allen Mfg. Co., Nashville, Tenn
Born Steel Range Co., Cleveland, O
Chicago Stove Works, Chicago, Ill
Floyd-Wells Co., The Chicago, Ill. & Royersford, Pa
Foster Stove Co., The, Ironton O
Fox Furnace Co., Elyria, Ohio
Landay Steel Range Co., St. Louis, Mo
Monitor Stove & Range Co., Cincinnati, O
Ohio Stove Co., Portsmouth, O
Paxton & Gallagher, Omaha, Neb
Portsmouth Stove & Range Co. Portsmouth, Ohio
Quality Stove & Range Co., Belleville, Ill
Stove & Range Co. of Pittsburgh, Pittsburgh, Pa.

Stoves—Alcohol
Cohn & Co., G., New York, N. Y
Thurnauer, Otto, New York, N. Y

Stove Mats
Stuber & Kuck, Peoria, Ill

Stove Patterns
Cleveland Castings Pattern Co., Cleveland, O
Cope Pattern, Geo. W. Wks., Detroit, Mich
Quincy Pattern Co., Quincy, Ill
Vedder Pattern Works, Troy, N. Y
Weller Pattern Co. Quincy, Ill

Stove Pipe
Hemp & Co., St. Louis, Mo

Stove Pipe Thimbles
Stuber & Kuck, Peoria, Ill

Stove Polish
A-B Polish Co., Chicago, Ill
Nickel Plate Stove Polish Co., Chicago, Ill

Stove Putty
Connors Paint Mfg. Co., Wm., St. Louis, Mo
Dixon, Jos. Crucible Co., Jersey City, N. J.

Stove Repairs
American Stove Repair Works, St. Paul, Minn
Brauer, A. G., Supply Co., St. Louis, Mo
Manufacturers Stove Repair Co., Chicago, Ill
Northwestern Stove Repair Co. Chicago, Ill
U. S. Stove Repair Co., Minneapolis, Minn

Sugar Kettles
Sperry, D. R. Co., Batavia Ill

Supplies—Foundry
Obermayer Co., S., Cincinnati, O

Supplies—Stove Dealers'
Brauer, A. G., Supply Co., St. Louis, Mo

Tacks
Hungerford, U. T., Brass & Copper Wks New York, N. Y

Tapes
Lufkin Rule Co., Saginaw, Mich

Technologist
Hooper, C. N. Dubuque, Iowa

Thermometers—Oven
Evans Stamping & Plating Co., Taunton, Mass

Tin—Perforated
Harrington & King Perforating Co., Chicago, Ill

Tinners' Furnaces
Clayton & Lambert Mfg. Co., Detroit, Mich
Turner Brass Works, Sycamore, Ill

Tinners' Tools
Armstrong, Blum Mfg. Co., Chicago, Ill
Auld & Conger Co., Cleveland, O
Berger Bros. Co., Philadelphia, Pa
Bertsch & Co., Cambridge, Mass
Dries & Krump Mfg. Co., Chicago, Ill
Lufkin Rule Co., Saginaw, Mich
Niagara Machine & Tool Works, Buffalo, N. Y
Robinson Mfg. Co., J. M., Cincinnati, O
Smith & Hemenway Co., New York N. Y
Weiss & Co., H., New York, N. Y

Tinplate
American Sheet & Tin Plate Co., Pittsburg, Pa
Eller Mfg. Co. Canton, O
Follansbee Bros. Co., Pittsburgh, Pa
Merchant & Evans Co., Philadelphia, Pa
Schoedinger, F. O., Columbus, O
Tanner & Co. Indianapolis, Ind
Wheeling Corrugating Co., Wheeling, W. Va

Tinware Trimmings
Berger Bros. Co., Philadelphia, Pa

Tools, Etc.
North Bros. Mfg. Co., Philadelphia, Pa
Rock Island Tool Co., Rock Island, Ill
Simmons Hardware Co., St. Louis Mo

Tools—See Carpenters' Tools

Tools—Linemen's
Smith & Hemenway, New York, N. Y

Trowels
Avery Stamping Co., Cleveland, O
Disston, H. & Sons, Inc., Philadelphia, Pa
Griffin Mfg. Co., Erie, Pa

Tubing—Brass and Copper
Hungerford, U. T., Brass & Copper Co. New York, N. Y

Tubing—Heavy Tin
Dieckmann, Ferdinand, Cincinnati, O

Ventilators
Berger Mfg. Co., Canton, Ohio
Burt Mfg. Co., Akron, O
Canton Art Metal Co., Canron, O
Canton Mfg. Co., Canton, O
Eller Mfg. Co., Canton, O
Friedley & Voshardt, Chicago Ill
Globe Ventilator Co., Troy, N. Y
Iwan Mfg. Co., Streator Ill
Merchant & Evans Co., Philadelphia, Pa
Powers & Williams, Streator, Ill
Pullman Mfg. Co., Rochester, N. Y
Uno Ventilator Co., Lynn, Mass

Vises—Automatic Swivel
Rock Island Tool Co., Rock Island, Ill

Wagons
Sycamore Wagon Wks., Sycamore, Ill

Washers
Columbus Bolt Works., Columbus, O

Washing Machines
White Lily Mfg. Co., Davenport, Ia

Wire
American Steel & Wire Co., Chicago, Ill

Wire Goods
Denning Wire & Fence Co., Cedar Rapids Ia
Pittsburgh Steel Co., Pittsburgh Pa

Wants and Sales

For Paid Yearly subscribers THE AMERICAN ARTISAN will insert under this head advertisements of six lines WITHOUT CHARGE for employers wishing to secure employes, persons seeking situations, parties desiring to purchase a business, businesses for sale, partners wanted, to exchange, etc. Those who respond to these announcements will please mention that they "READ THE ADVERTISEMENT IN THE AMERICAN ARTISAN."

BUSINESS CHANCES.

PATENTS HUBERT E. PECK 629 F. Street, N. W. Washington, D. C. Consulting Expert in Patent Causes. U. S. and Foreign Patents. Send for leaflet on "Rejected Patent Applications."

For Sale—Well established hardware business in one of the most beautiful cities in Wisconsin of 6,000. Located in the finest farming community. A rare opportunity to get as clean a stock of goods and as good a location. Partnership dissolved and present owner wishes to retire on account of old age. Address L-26, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

Wanted—Second-hand wooden or light steel cornice brake eight feet long. State price. Address Messenger & Parks, Aurora, Illinois. 11-3t

For Sale—75c on the dollar will buy one of the finest stocks of General Hardware with Warren Fixtures, including Stoves, Paints, Oils, Glass, etc., in Northern Illinois. This stock will invoice about $10,000 and is a fine proposition for a Hardware Man and will stand close investigation. This city has a population of ten thousand inhabitants and is one of the most beautiful cities in the state for its size. This is a splendid business opportunity. No trade. Write for particulars. Address L-22, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. ufn

For Sale—Cash. $5,000 hardware stock and good fixtures, with tinshop. Yearly sales, $18,000; profit, $4,000. Good town in south central Minnesota. Must sell on account of health. Address Box 198, Sherburn, Minnesota. 10-3t

TINNER'S TOOLS.

Wanted to Buy—Good second hand eight-foot cornice brake, if it can be bought at a bargain. Address C. J. Johnson, Dell Rapids, South Dakota. 10-3t

HELP WANTED.

Tinner Wanted—One who understands furnace and plumbing work. Good job at right wages to the man who can fill the bill. Address C. I. Fawley, Coggon, Iowa. 12-1t

Wanted, At Once—Two first-class cornice makers. Address Messenger & Parks, Aurora, Illinois. 12-3t

Wanted—Tinner and furnace man at once. Address Hoernel Hardware Co., Racine, Wisconsin. 12-3t

Tinner Wanted—$3 per day of ten hours, with promise of more to a live, hustling tinner and furnace man. Good job and steady if you fill the bill. Address Charles Hahn, Mandan, North Dakota. 12-3t

Wanted At Once—First-class tinner, plumber and furnace man. Strictly sober and reliable. Good wages and steady job as long as wanted, if satisfactory. Located in the best fruit country on earth. Population of town about 1,200. Address The Curtis Hardware Co., Paonia, Colorado. 11-3t

Wanted—First-class plumber, steam fitter and tinner. One with not less than ten years' experience. Must be sober and reliable. To the right man we will guarantee a steady job and $85 per month. Address Arps Brothers Hardware Co., Ouray, Colorado. 11-3t

Wanted—Good all around tinner and plumber. One who understands heating, etc. Steady job for the right kind of man. Address Iowa Hardware Co., Vinton, Iowa. 10-3t

Wanted—All around tinner and plumber for country shop. One who can repair pumps and help in store when needed. Steady job year around. No boozer need apply. Address William Wilker, Wyoming, Iowa. 10-3t

Wanted—All around tinner and furnace man, who also understands plumbing. Must be sober and reliable. Wages, $2.50 per day. Application must be accompanied with references. Address Kewaunee Hardware Co., Kewaunee, Wisconsin. 10-3t

Wanted—Two tinners and furnace men at once. Address McGuire Bros., Rockford, Illinois. 10-3t

Wanted at Once—First-class tinner and furnace man, with some experience in plumbing preferred. Must be sober and reliable. When writing state wages and give references. Address J. H. Ford, Dodgeville, Wisconsin. 10-3t

Wanted—First-class tinner. One used to cornice work preferred. Union shop. Address Smith & Stewart, 5626 South boulevard (Austin Sta.), Chicago, Illinois. 10-3t

SITUATIONS WANTED.

Situation Wanted—At once, as clerk in hardware store. Competent to take full charge. Address L-25, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

Situation Wanted—By young man with eight years' experience in hardware store and tinshop. Wants position with some good furnace house or in retail hardware store as clerk. Address L-24, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

Position Wanted—By young man with seven years' experience in retail hardware as clerk. Speaks English and German. Can do bookkeeping and has had some experience in shop. Best of references. State wages. Address L-23, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

Position Wanted—By first-class, capable, strictly sober mechanic as tinner, hot air furnace man and general job worker. Address L-21, care THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 11-3t

Situation Wanted—Retail hardware merchant would like position to call on retail trade in northwest territory with line of samples. Address L-20, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-3t

SPECIAL NOTICES.

Traveling Salesmen Wanted

For a large Stove, Range and Hollowware Manufacturing business to cover the territory of Arkansas, part of Missouri and Oklahoma. Address B-14, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-3t

SITUATION WANTED

By experienced hardware salesman. Either salary or commission. Well acquainted in Minnesota and Dakota. Address B-12, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-6t

For Sale!

Machinery and Implement business in a good busy town, 1400 population. No competition. A rare bargain. In Northern Wisconsin. Address B-16, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 11-2t

WANTED SALESMAN

To sell a very low priced line of cannon and laundry stoves on a commission basis. Address Box 14, Station D, Cleveland, Ohio. 12-4t

SALESMEN WANTED

To carry a full line of Aluminum Baking Pans and Kitchen Ware, which are all good sellers. Must be able to give references. Address Standard Aluminum Co., Two Rivers, Wisconsin. 12-4t

FOR TRADE

320-acre farm, Sully County, South Dakota. First-class soil, all can be plowed, some improvements and fenced. Will trade for hardware or implements. Write at once. Address Dalton & Vaughn Land Co., Pierre, South Dakota. 12-2t

FURNACE AGENCY

Wanted for next year, for the state of Wisconsin. Must be an up-to-date furnace. Commission basis only. Have sold furnaces on load for eighteen years. Can furnish bonds. Address "Furnace," care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-2t

For Sale or Trade

In Oregon Real Estate

Oldest Hardware and Machinery stand. No stock. Brick building; best location. Only one competitor. In Southern Minnesota town. Address R. Reierson, 182 Morrison Portland, Oregon. 10-9t

Salesman Wanted

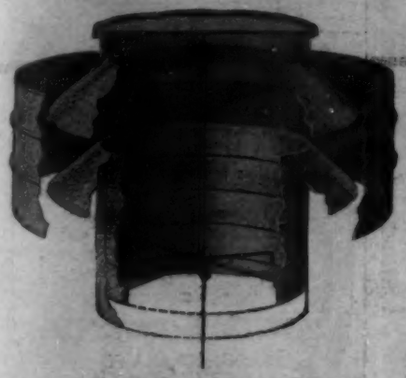
To sell high grade line of Stoves, Ranges and Heaters on commission, in the state of Indiana. For full information address S. E. I. W., 1917 Peach St., Erie, Pennsylvania. 10-4t

Hardware Business For Sale!

FOR SALE: Hardware business. One of the oldest and most successful IN THE STATE OF NEBRASKA, in one of the largest and best cities within the richest and best farming district in the State. Competition good and business not overdone. Best location in the West for a good hustling party. It will pay you to investigate. Address G-7, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-4t

WANTED:

By a large manufacturing concern, located in the middle west, a man who has had experience and is fully capable of taking entire charge of a steel ceiling and stamping department. Must have full knowledge of all matters connected with the cataloging, selling and stamping of ceilings. State fully your experiences and with whom you are now employed. Give full information as to any particular lines on which you are equipped. All applications will be considered strictly confidential. Address B-11, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-4t



Notice Sliding Sleeve Damper. Patented.

Good Evidence

The following letter is received from a "Burt" user who at three different times has come back for more "Burts" for use in his factory:

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Gentlemen:—We have your letter of the 10th inst. with reference to the 8-30" Glass Top and 6-48" Metal Top Burt Ventilators sold us, and beg to advise that we are finding these ventilators satisfactory.

Yours truly,
THE WM. J. OLIVER MFG. CO.

Burt Ventilators

always prove their worth and their superiority wherever they are installed. The Burt construction is unusually thorough from the selection of the raw material down through the finishing of the last rivet.

The features of Burt Ventilators are unusual. They have patented adjustable sliding sleeve damper. They are storm and dust proof whether open or closed. They can be opened to any degree by a simple pull of the adjusting cord and are made with glass tops, thus making a combination skylight and ventilator.

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Send for our new 92-page catalog giving fine illustrations of mills, shops, factories, and residences where Burt Ventilators are in successful use.

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Largest manufacturers of Oil Filters and Exhaust Heads in the world.
Geo. W. Reed & Co., Montreal, Sole Manufacturers of "Burt" Ventilators for Canada.

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Stock of hardware and farm implements in the largest town (population 1000) in the best farming and dairy country in Northwestern Wisconsin. Only one other hardware business. Enough for both at a good legitimate profit. Stock will invoice $4,500. Can reduce to suit buyer. Business established twenty years. Other business reason for selling. Address B-18, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 11-2t

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Do away entirely with wiping joints. A practical article and BIG SELLER.
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—How to stop cost leaks
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—How to get and hold a position
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Sending for this free book binds you to nothing, involves you in no obligation, yet it may be the means of starting you on a broader career. Surely you will not deny yourself this privilege, when it involves only the risk of a postal—a penny! Simply say "Send me your 9,059-word Booklet." Send to

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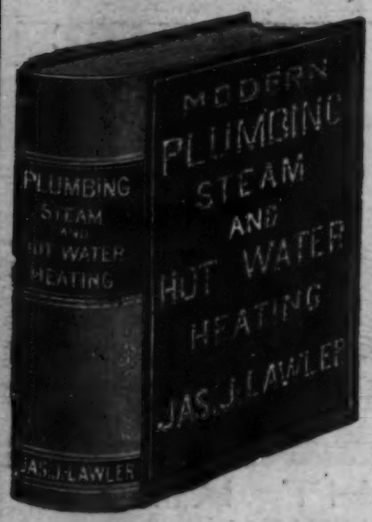

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Heavy Stove Plate Facing
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will give you clean, smooth castings with that dark-blue color you like to see. Let us send you a barrel of each on approval.
The S. Obermayer Co.
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American Stove Repair Works
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WELLER PATTERN Co
DESIGNS and ESTIMATES FURNISHED FOR ALL KINDS OF STOVE PATTERNS
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Russia Finish, pat. Ink
Stove Pipe
It is made of a very high grade of uniform color Blue Polished Steel, and is coated to prevent rusting. Made in all sizes. Packed twenty-five and fifty joints to crate. For sale by the jobbing Hardware Trade throughout the United States. Mfg. by
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ST. LOUIS.
In the event your jobber does not handle this pipe, send your inquiries to us.

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Prompt Shipments. Give Us a Trial.

NORTHWESTERN STOVE REPAIR COMPANY
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LARGEST STOCK OF
STOVE AND FURNACE REPAIRS
IN THE WORLD
Orders filled immediately.
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For Stoves and Heaters
First-Class in Wood and Iron
Vedder Pattern Works, Troy, N.Y.
Established 1835

PATTERNS
For Stoves and Heaters
The Cleveland Castings Pattern Co.
CLEVELAND, OHIO

U. S. STOVE REPAIR COMPANY
REPAIRS TO FIT ALL STOVES AND FURNACES
PROMPT SHIPMENTS
Ask for Order Blanks
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MANUFACTURE
A Full Line of Horse Nails
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THE "ACME"

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ROMAN, ROUND FACE GOTHIC, SHARP FACE GOTHIC, HAIR-LINE GOTHIC, FLATTENED FACE GOTHIC, ANTIQUE FONTES AND REVERSED FAMOS FOR BRANDING IRONS.
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Improved Quick and Easy, Rising Steam, Electric and Hand Power.
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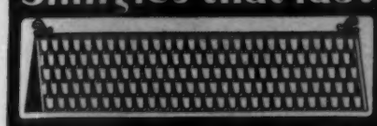
CLEVELAND, O.

WALTERS'

Shingles that last



Made from Galvanized Tin and Painted Tin
Storm, Rust and Fire Proof
Do you want to increase your business? This is YOUR OPPORTUNITY. Write for catalogue samples and prices.

National Sheet Metal Roofing Co.
JERSEY CITY, N. J.

Gerock Bros. Mfg. Co.

Sheet Metal Ornaments and Statuary

Detail Work a Specialty

Ask for Catalogue

1227 Manchester Ave.
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Metal Roofing and Siding.
Corrugated Sheets, painted or galvanized.
Metal Window Frames and Sash Glazed with wired glass.
Skylights.
Skylight Gearing.
Price lists and estimates furnished upon request.

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THE AMERICAN ARTISAN Ads Bring Results.

CHAINS FOR FURNACE PURPOSES

"Star Brand"

TRADE MARK STAR BRAND **BRASS AND IRON** TRADE MARK STAR BRAND

Single and Double
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BRONZE AND STEEL SASH CHAIN

BRASS KINKLESS SASH CHAIN
SPECIALLY ADAPTED FOR FURNACES
Full Assortment in Stock Ready for Immediate Shipment.

U. T. HUNGERFORD BRASS & COPPER CO.
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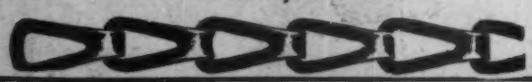


Workable Serviceable Profitable

AMERICAN SHEET & TIN PLATE CO. APOLLO BEST BLOOM TRADE MARK REGISTERED
PITTSBURGH

"APOLLO BEST BLOOM"

Galvanized Sheets

A soft, pliable product, uniformly high-class throughout.

Easy working, serviceable sheets save money in time, labor and repairs, and economy along these lines insures profit. Therefore, you cannot afford to use other than "APOLLO."

Our Weight Card—giving sizes, gauges and weights of galvanized sheets—is free for the asking.

AMERICAN SHEET AND TIN PLATE COMPANY
FRICK BUILDING PITTSBURGH, PA.

SPERRY'S SUGAR KETTLES

Light, smooth, full measure and guaranteed perfect. Made from original patterns. Metal, the right kind in the right place. Ask your jobber for them or write us.

D. R. SPERRY & CO. HOLLOW-WARE FOUNDERS **Batavia, Ill.**

Write for Circulars and Terms

The Ideal Epworth Acetylene Generators

Are Ideal in construction, Ideal in light producing power, Ideal in giving out steady light, Ideal in selling qualities, Ideal in lighting Dwellings, Stores, Hotels, Churches and Towns. Acetylene light is the safest, best, cheapest, brightest, finest light in the world, when produced in the Ideal Epworth Generators.

Satisfaction Guaranteed. Agents Wanted.

IDEAL EPWORTH ACETYLENE CO., JOHNSTOWN, PA.
(Successors to Epworth Gas, Light & Heating Co., Waterloo, Iowa) WATERLOO, IOWA

Mysterious? No!

There's nothing mysterious about the profitability of an agency for

Berger's "Classik" Steel Ceilings

When you offer the most complete line of artistic Steel Ceilings in existence and show the catalogue that backs up the assertion, how's your customer going to get away from that? And with material so handsome, so harmonious, so effectively stamped, so easily erected, so snugly fitting and so reasonable in price, what's to prevent you, a wide awake, live, hustling dealer, from getting the orders and building up the kind of a Steel Ceiling business that will make it worth while to you?

You can sell Berger's "Classik." It will pay you to do it. The new catalogue will help you.

Write for Catalogue D.-9 and details TO-DAY.

THE BERGER MFG. CO., Canton, O.

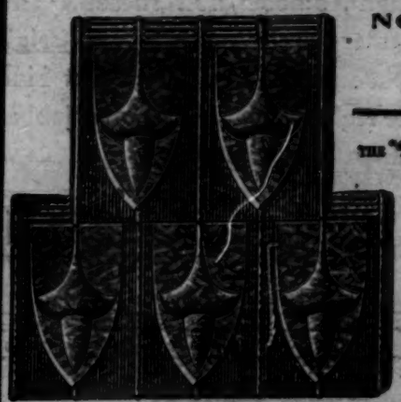
New York *Philadelphia* *Boston* *Chicago*
St. Louis *Atlanta* *Minneapolis* *San Francisco*

"TITELOCK" TRADE MARK "TITELOCK" TRADE MARK

See the crimps or narrow corrugations formed lengthwise of the plates, which mean RIGIDITY and STRENGTH.

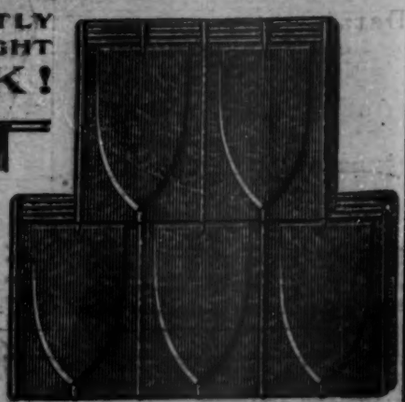
Send for Free Samples and compare them with other makes. PRICES QUOTED ON APPLICATION.

METAL SHINGLES



NOTE THIS PERFECTLY WATERTIGHT LOCK!

THE SIDE-LOCK is so formed that the matching beads are absolutely straight and true to size. The outer flange is pressed to such an angle that after it is inserted in the recess of the adjoining shingle the act of laying the shingle springs it into a *perfectly tight* contact at both the top and bottom with the beads positively nested.



Style "A" Showing Method of Laying. Style "B" Showing Method of Laying.

MILWAUKEE CORRUGATING CO.

SOLE MANUFACTURERS
MILWAUKEE, WIS. KANSAS CITY, MO.
Write for Booklet.

"TITELOCK" TRADE MARK "TITELOCK" TRADE MARK

NOTHING EXPERIMENTAL ABOUT THE ERECTION OF

WHEELING METAL CEILINGS

ANY GOOD WORKMAN CAN ERECT THEM

We Furnish Drawings Showing the Location of Each Plate.

Manufactured by

WHEELING CORRUGATING CO.

(Makers of Whitaker Old Style Roofing Tin)

WHEELING, W. VA.

BRANCH OFFICES AND WAREHOUSES:

New York City - - - - - - 47 Cliff Street
Chicago - - - - 23, 25, 27 North Clinton Street
St. Louis - - - - - 1006-8-10 Spruce Street
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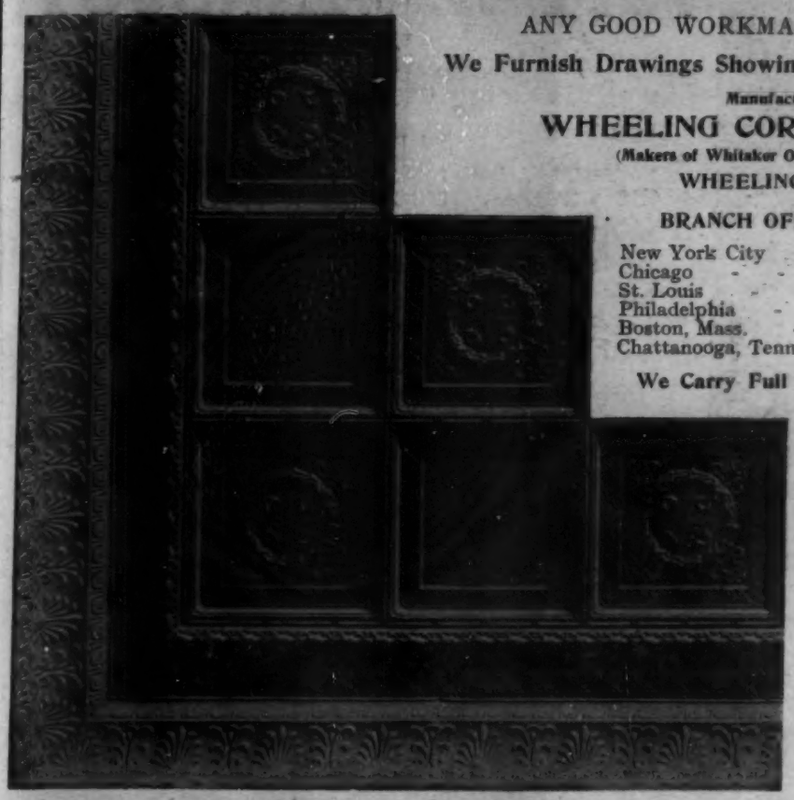
Boston, Mass. - - - - 132 and 134 Pearl Street
Chattanooga, Tenn. - - - - - - King Street

We Carry Full Stock in All Our Warehouses



WHEELING CEILING DESIGN No. 8723

Adapted To All Requirements From Vestibules To Auditoriums

Our Designs And Workmanship Are The Best

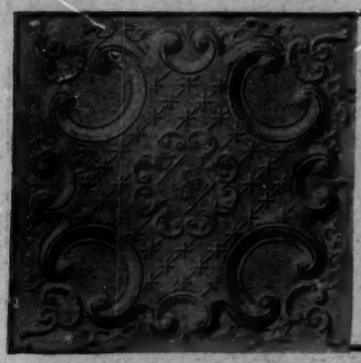
STEEL-WAINSCOT

Metal for interior ornamentation of side walls is being used more and more each year. It has passed the experimental stage and is now recognized by leading Architects and Contractors the world over as being more sanitary, lasting and in every way better than plaster or wood. It is permanent, remaining in place as long as the building itself, and admits of more varied designs and ornamentation than any other material. The price is practically the same.

We show in our Catalog the newest patterns and most modern designs on the market. They are different from the ordinary and more common kinds, and it is just that difference that makes them far superior.

Send for "Our New Catalog" with further particulars and prices.

F. O. SCHOEDINGER, - Columbus, O.
146 North Third Street



WE CAN MEET THE DEMAND
for "SOMETHING DIFFERENT" in

METAL CEILINGS AND SIDE WALLS

Our goods are different. The designs are NEW and ORIGINAL. The PLATES are ACCURATE. The JOINTS fit PERFECTLY. For ECONOMY in the COST OF ERECTION our plates lead all others. **We are quick shippers and can give you satisfaction.** Write to-day for CATALOG "A."

Wm. Foster & Sons Sheet Metal Works, 1000 E. Carpenter St. SPRINGFIELD, ILL.

La Crosse Steel Roofing and Corrugating Co.

LA CROSSE, WISCONSIN

MANUFACTURERS OF

EAVES TROUGH	ROOFINGS AND SIDINGS
CONDUCTOR PIPE	STEEL CEILINGS
CUT OFFS	CORNICES
MITRES, ENDS AND DROPS	SKYLIGHTS

Quick Shipments Our Specialty *Send for Catalog*

Plecker's *Corrugated* Expanding *Conductors*

Have no Cross Seams. Made of Galvanized Iron in ten-foot lengths. [redacted] Will not burst when full of ice.

CLARK, QUIEN & MORSE, PEORIA, ILL.

AMERICAN INGOT IRON

RUST RESISTING SHEETS

99.94% PURE

AMERICAN GENUINE INGOT IRON All

MIDDLETOWN, O.

Write for
Price Sheet AA
On Roofing, Black and
Galvanized Sheets

Purest Iron Made in
This Country or
Abroad

Accelerated Acid Tests
Demonstrate Its
Superiority to Charcoal
Iron Sheets

MANUFACTURED EXCLUSIVELY BY

THE AMERICAN ROLLING MILL CO.

MIDDLETOWN, OHIO

When Ordering **Charcoal Iron Conductor Elbows**

Specify With

GUARANTEE *F. Dieckmann* Stamped in the Metal.

CHARCOAL IRON

Makers of the Elbows which can be erected without Refitting and Solder, save Labor and Material.

THE FERDINAND DIECKMANN CO.

Station B, CINCINNATI, OHIO

PATENTED

"MERCHANT'S FIRE RETARDING"

"Reg. in U. S. M&E Pat. Off."

14 x 20 TERNE PLATES

For Fire Doors and Shutters

Made to conform strictly to specification of the NATIONAL BOARD OF UNDERWRITERS.

Each Sheet Stamped with Brand and Thickness.

PHILADELPHIA
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MERCHANT & EVANS CO.

Sole Manufacturers

CHICAGO
KANSAS CITY
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THE ELLER TRADE-MARK
is a little thing to look for, but a big thing to find; it appears on all genuine
ART METAL CEILINGS

Tin and Terne Plate — Steel Roofing
Eaves Trough, Conductor Pipe — Brick and Stone Siding
Elbows and Shoes — Cornice and Skylight

ELLER MFG. CO. : : CANTON, OHIO

WHY IT LEADS!

The No. 1 C. & L. Fire Pot produces a hotter flame, using less gasoline than any other make. The burner is capable of every needed adjustment and is the outgrowth of over 20 years' practical manufacturing experience. Heats the heaviest irons in half the time required by other makes at the same time melting a kettle of lead or solder. The No. 1 can be used as a torch or brazing fire. This fire pot affords a "knack in use" made possible only through its perfect construction, simplicity and easy operation.

No. 1 Firepot—$6.00 Net.
Jobbers' supply at factory prices, or we will ship direct if cash accompanies the order.

Booklet Free!

CLAYTON & LAMBERT MFG. CO.
Detroit, Mich., U. S. A.

Lock Joint
Metal Ceilings

Handsome Panel Effects

Special Designs Submitted on Request

Artistic Combinations

Perfect Joints

Absolutely Dust-Proof

Send for Catalog "D"
S. Keighley Metal Ceiling & Mfg. Co.
Pittsburgh, Pa.
Baltimore New York Washington Boston

Gray's School
—OF—
Sheet Metal Pattern Drafting

Can you lay out any pattern?
If not, write for
Sample blueprint drawing and Circular giving full information concerning our 25 months' course in Sheet Metal Pattern Drafting.

Every study in this course is solid study on the development of patterns as they are required to be made in a MODERN CORNICE OR SHEET METAL WORKS.

Having adopted the easiest and shortest methods of developing patterns, and selected the problems that come up in every day work from the easiest to the hardest.

Two evening's study each week will fit any ambitious mechanic or apprentice to lay out and develop anything in the sheet metal line.

NOW IS THE TIME TO START THIS COURSE!

The evenings are becoming cool and long, which is conducive to hard study.

The many scholars who have been advanced to positions of foremen and cutters since taking this course is ample proof of the great benefit they have received through this school.

You study at home, in a class by yourself, at your own spare time. This (25) months' course costs less than 5 cents a day, payable monthly.

Write for circular giving full information concerning this school, also full size blueprint drawing, enclose 4 cents in stamps to cover postage. When writing please mention THE AMERICAN ARTISAN. Address:

GRAY'S SCHOOL
1028 Jackson Ave., New York

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for any purpose. Our new and complete catalogue is now ready for distribution.

THE CANTON ART METAL CO.
CANTON, OHIO

C. N. HOOPER, Dubuque, Ia.
Vitreous Enameling
TECHNOLOGIST
Designs, builds and starts new plants, improves quality and reduces the costs in those already established.

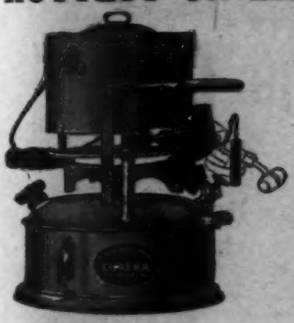
RUBY FLUID

ASK FOR BOOKLET

A highly important discovery by a practical working tinner. A Perfect SOLDERING Flux, for GALVANIZED and ALL OTHER METALS. Shipped Ready FOR USE in TIN CANS on Approval.

THE RUBY CHEMICAL CO., Inc. Johnstown, Ohio

HOTTEST ON EARTH



Let us prove it.

A trial order will convince you.
No. 6 Eureka, price each, $6.00 net
No. 14 " " " 4.50 "
Jobbers sell at factory price

The TURNER BRASS WORKS
26 Park Avenue, Sycamore Ill., U. S. A.

H. WEISS & CO.

20 Cliff Street, NEW YORK

Skylight Gearing and Chain Lifts

Tinsmiths' and Plumbers' Tools

Cornice Makers' Tools

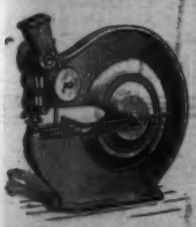
Coppersmith's Tools

Pipe Threading Machines

Second-Hand Goods Bough Sold and Exchanged

Punch, Shear and Bender Combined for ¼" Iron

LEVER PUNCH



This Lever Punch is made any required size. It is a convenient tool for punching plates, bars or angles. We build a complete line of Shears, Punches and Bending Rolls, all sizes, hand or power.

Write for Catalog "F."

BERTSCH & CO.
CAMBRIDGE CITY, IND.

No. 40

Berger's Wrought Star Ears

This is as fine an ear as can be made. Every piece is perfect, with fine finish, nicely tinned, same size and thickness as our malleable Star ears. No. 30 corresponds to malleable No. 3, etc. Furnished in gross boxes or in bulk to suit the purchaser. Samples mailed free upon request.

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PHILADELPHIA

Combined Punch and Shears.

Tools for Sheet Metals

INCLUDING

Tinners' and Roofers' Tools,
Shears, Punches, Presses and Dies, Can-Making Machinery

MADE BY

NIAGARA MACHINE & TOOL WKS., Buffalo, N.Y.

MARVEL

Patent applied for

PORTABLE PUNCH No. 20

Made entirely of STEEL.
Punches ¾ in. hole in ¾ in. and equivalent
Let us send you one on trial.
Write for circular and price of this and other Marvel Punches and Shears.
ARMSTRONG-BLUM MFG. CO.,
106 N. Francisco Ave., Chicago, Ill.

C. G. Hussey & Company

PITTSBURGH, PENNA.

Manufacturers of

Soft Copper, Copper Gaskets, Copper Bottoms, Soldering Irons
Copper Nails and Tacks, Tinned Copper, Polished Copper,
Cold Rolled Copper, Special Shapes Sheared or Stamped Slating Nails.

PROMPT SHIPMENT FROM STOCK.

TWO MORE REASONS WHY STEEL BRAKES EXCEL

OTHERS WILL FOLLOW

The strength of steel being approximately three times that of iron it is clear that much heavier work can be done with the same effort on a brake so constructed.

Another quality of steel is that it will not warp like wood nor get sprung as iron will, thus assuring a straight and perfect bend always.

A postal will bring you net prices F. O. B. your city.

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Halsted and 32nd Street, CHICAGO

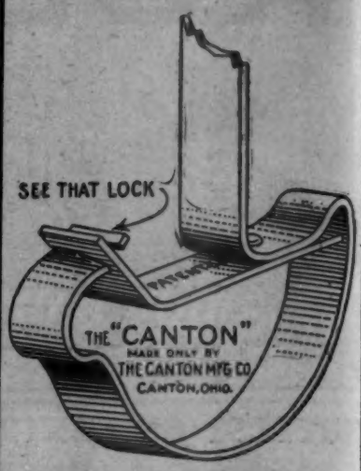
Where Successful business men have advertised is pretty safe to advertise.

CORTRIGHT

DID you ever stop to think whether or not it would pay you to handle CORTRIGHT METAL SHINGLES? Probably not—or you didn't consider along the right lines. You never think of trying for the job to lay the roof on a beautiful residence, nor a church, nor a big public building, do you? No, a plain tin roof wouldn't be the thing? See the point we're driving at? The handling of CORTRIGHT SHINGLES opens all these avenues of making money to you—gives you ten chances to one you now have to make money. What are you going to do about it? We're willing to help you get the business if you'll drop us a postal saying you are willing to go after it.

CORTRIGHT METAL ROOFING COMPANY
PHILADELPHIA AND CHICAGO

The
LATEST and BEST



The "Canton"

is the strongest and most economical **Eave Trough Hanger** on the market.

Ask for Prices.

The Canton Mfg. Co.
Canton, Ohio.

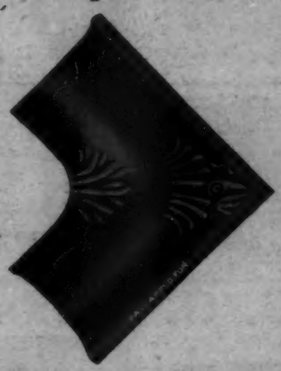
Manufacturers of Cornice, Skylights, Ventilators, Metal Ceilings, etc.

The F.-V. Co. Ornamental One-piece Mitre

THE FINEST
ONE-PIECE
MITRE
ON THE
MARKET

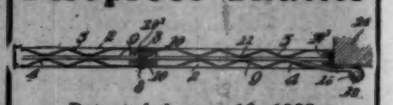
ORNAMENTAL
DURABLE
CHEAP

Write for Prices
and Samples



Friedley-Voshardt Co., 194-204 Mather Street, **Chicago**

The TURNER Fireproof Shutter



Patented August 18, 1908

No. 896,176. HUGH L. TURNER, Tampa Florida, Inventor. Assignor of one-half interest to Nellie E. Fernandez, Tampa, Florida.

Application for Patent made by SNOW & CO., May 8th, 1908.

For particulars write

EAGLE CORNICE AND SHEET METAL WORKS
TAMPA, FLORIDA

DELPHOS B. B. GALVANIZED SHEETS

Absolutely Perfect.

DELPHOS Corrugated, Pressed Standing Seam, V Crimp, Three V Crimp, Roll, and Roll & Cap Galvanized Roofings.

All Roll Roofings Resquared and Double Cross Locked.

DELPHOS Galvanized Eaves Trough, Conductor Pipe, Elbows, Etc. Roofing Plates (All grades).

SOLDER—Faultless, B. T. & L. and Standard Brands.

DELPHOS MFG. COMPANY
DELPHOS, OHIO

Write for our New Catalogue.

100 Tinners' Patterns

COMPLETE FOR **$1.00**

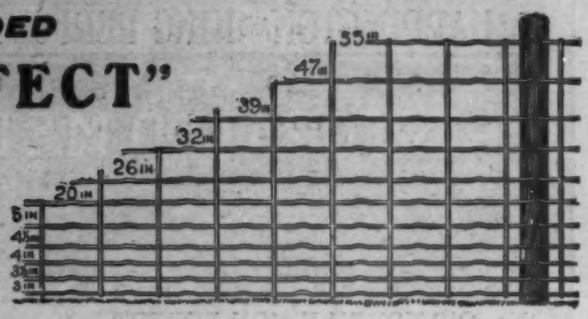
Sent Postpaid on Receipt of Price.

DANIEL STERN,
355 Dearborn St. Chicago.

Eliminate All Your Fence Troubles by Using the

ELECTRICALLY WELDED

"PITTSBURGH PERFECT" Fences



The strongest on the market and the most satisfactory. You can't know what a really good fence is until you have tried the

"PITTSBURGH PERFECT."

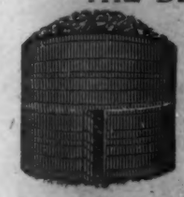
WRITE FOR OUR CATALOG TO-DAY.

Pittsburgh Steel Co., Pittsburgh, Pa.

DEALERS! Here is a sample of our Farm Advertising

Handle ours and you will be on the right side. The farmer knows about them. We have a branch at Kansas City and can ship on short notice.

"THE DENNING" CORN CRIBS AND GRAIN BINS



Will store your whole crop at a nominal cost.

"THE DENNING" FENCE

Will take care of your poultry, hogs and stock.

"THE DENNING" LAWN FENCE

Will ornament your premises.

Ask your dealer for "The Denning." Take no substitute.

THE DENNING WIRE & FENCE CO. CEDAR RAPIDS, IOWA

LIGHTNING RODS

We manufacture Pure Copper Wire Cable Lightning Rods, made of 28, 30 and 49 Wires, with complete outfit of trimmings.

E. A. FOY & CO., Cincinnati, Ohio

Trade Supplied at Lowest Rates.
Send for Catalogue "B."

Iwans' Volcano Revolving Chimney Top

Sizes 6 to 12 inches. Sold by jobbers of Hardware and Tinners' Supplies.

Notice one of its **Strong Features.** The upward sloping opening in back of hood creates a constant upward draft, no matter how depressing the atmosphere.

You need it for some of your customers' chimneys.

Send postal for catalogue.

IWAN BROTHERS
Mfrs. of Hardware Specialties
STREATOR, ILL.

Uno Revolving Ventilators

A sure cure for smoky chimneys, the best for ventilation.

4' to 30'

Send for Catalogue

Uno Ventilator Co.
P. O. Box 209 LYNN, MASS.

We have the best Pure Copper Cable

Lightning Rods

and fixtures on the market, and to prove what we say is right, we are willing to send any firm a sample outfit and they can look it over, and if it is not the best they have ever seen, and not satisfactory in every way, we want the whole shipment returned at our expense and it costs them nothing. We manufacture all our own goods and know just what they are, and we want every hardware dealer to write to us for prices and territory. We give a $500.00 guarantee and also one of our improved static machines.

WRITE TODAY TO

Maher & Son Lightning Rod Co., Preston, Iowa

The Powers AUTOMATIC Chimney Top

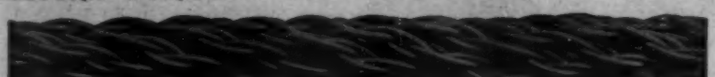
Iron mountings only or complete with cover and vane.

Double the sale and triple the efficiency of smoke stacks.

Powers & Williams
Streator, Ill.

Ask us for prices on skylight glass and metallic skylights.

"ELECTRA" PURE COPPER LIGHTNING RODS AND FIXTURES



NOTHING BETTER PRICES RIGHT WRITE US

To convince you we mean what we say, let us ship you an outfit upon approval. If you don't like it, you may return it to us at our expense

ELECTRA LIGHTNING ROD CO., 220-240 Market Street, ORESCO, IOWA

THE HARRINGTON AND KING-PERFORATING CO.

PERFORATED METALS

OF EVERY DESCRIPTION AND FOR ALL PURPOSES

FOR SCREENS OF ALL KINDS

No. 212 NORTH UNION STREET, CHICAGO, ILL.

New York Office, 114 Liberty Street.

FREEZERS

"LIGHTNING"

THAT EXCEL IN
Easy Running
Quick Freezing
Economy
Convenience
Practical Results

THAT ARE
Well Advertised
In Demand
Easily Sold
Satisfactory in Use
Of Known Reputation

"BLIZZARD"

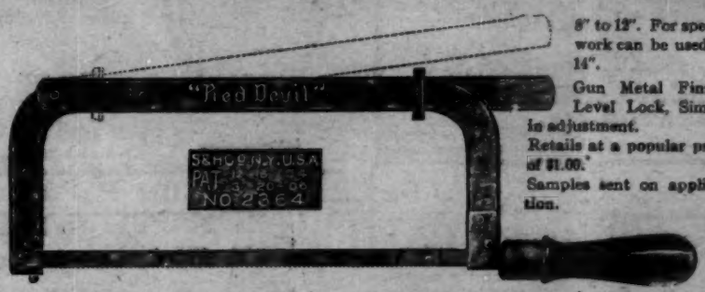
THE "BEST MADE" because in practical use, they are convenient, compact in size, use smallest amount of ice and salt, run easily, freeze quickly, produce smoothly frozen creams or desserts with little bother and less work. We make also

MACHINE FREEZERS AND ICE BREAKERS

Sold by Leading Jobbers Catalog Sent Free

NORTH BROS. MFG. CO. Philadelphia

Genuine "RED DEVIL" Hack Saw Frame



8" to 12". For special work can be used on 14".
Gun Metal Finish, Level Lock, Simple in adjustment.
Retails at a popular price of $1.00.
Samples sent on application.

Order through your jobber or direct from us. Insist upon the Genuine "RED DEVIL."

SMITH & HEMENWAY CO., 108-110 Duane Street, New York City

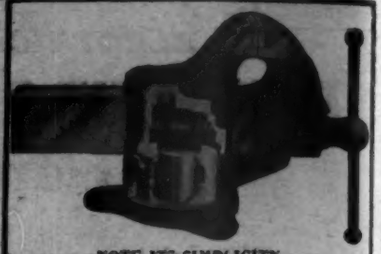
WE HAVE A HARDWARE DELIVERY WAGON THAT YOU CAN DEPEND UPON

Body 20 inches from the ground, full width; regular height wheels, and yet will turn short.

Easy to Load and Unload

Durability guaranteed. Complete catalogue on request. Mention this paper and address in full.

SYCAMORE WAGON WORKS, 109 Edwards St., Sycamore, Ill.



NOTE ITS SIMPLICITY

Automatic Swivel Vise

Locks Automatically by Tightening the Jaws

Saves 20 per cent Vise Labor

SEND FOR CATALOGUE.

ROCK ISLAND TOOL CO. ROCK ISLAND, ILLINOIS, U.S.A.

136 Liberty St. NEW YORK

116 Lake St. CHICAGO

DENVER, 208 McPhee Building

Blick No. 3 The Best Box For Rural Free Delivery

Be Just With Customers

Sell them Blick No. 3 boxes. They are big ones, 6½ x 8½ x 19 inches. Made of heavy galvanized steel. Painted green, the new government color. Same shape and color as city boxes. Have Positive Locking Flag Signal, Automatic Latch, Watertight Quality. Every box tested, every box right, every box warranted. They will get the business. You better get them. Order now.

$5.88 per Doz.

Blick - Williams Co.

Indianapolis, Ind.

BUCKEYE CARRIAGE PAINT

Ground in Fine Coach Varnish of Our Own Manufacture.

Dries quickly with a handsome gloss and durable finish.
It looks better, goes farther and lasts longer than any Paint on the market.
Unquestionably the Best Paint Manufactured.

MANUFACTURED BY
BUCKEYE PAINT & VARNISH COMPANY
TOLEDO, OHIO

LUFKIN Measuring Tapes

are made in every conceivable variety, to suit every purse and purpose, but all of the same superior quality.

¶ Our extensive advertising creates a demand, that every progressive dealer should be able to satisfy.

¶ It takes but a minute and a postal to ask for our catalog—it's more than worth while.

Please Mention The American Artisan

THE LUFKIN RULE CO. Saginaw, Mich., U. S. A.

New York London, Eng. Windsor, Ont.

DISSTON SAWS

Run Easiest
Cut Fastest
Last Longest

To the practical Saw User this tells the full story of HIGHEST PERFECTION in Material, Temper, Design and Workmanship attained for the DISSTON BRAND OF SAWS.

HENRY DISSTON & SONS, Inc.
Keystone Saw, Tool, Steel and File Works
PHILADELPHIA, PA.

A NEW PATTERN STANDARD LEVEL—Two Level Glasses, One Plumb Glass

Side glasses may be reversed at any time; all easily adjustable; all glasses in plain view from both sides; brass trimmings on both sides.

No. 31—Solid Cherry.
No. 32—Three-piece Cherry.
No. 33—Solid Mahogany.

THE BAKER - McMILLEN COMPANY, Akron, Ohio.

STRAP & T HINGES
Pressed
Steel Shelf
Brackets

BUTT HINGES
Barn Door
Hangers
and Track

Our Planished Steel STRAP and T HINGES are now all made on Automatic Machinery—Every one is as true as a Die.
Our BUTTS are unequalled in Workmanship and Finish, All our Goods Guaranteed—BEST IN THE WORLD.
(And they cost no more.)

THE GRIFFIN MFG. CO., 1500 Cherry St., Erie, Pa.

YANKEE [All Steel] DAMPERS and CLIPS

FOR SMOKE PIPE AND FURNACE PIPE

THE S. M. HOWES COMPANY, 40-46 Union St., BOSTON

SIMMONS' HODS

"Double Bottom" Handy Handle

Mr. Dealer:

How much Profit do you make on Coal Hods?

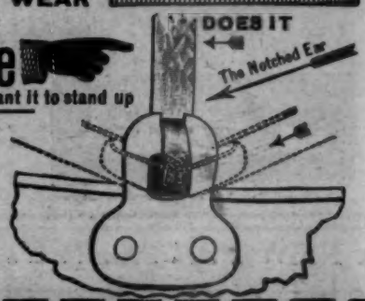
You can make more on "Ours".

WHY? BECAUSE— "Double Bottom" GIVES OVER TWICE THE WEAR

AND

Wire-Bound TOP AND BOTTOM STRONGEST WHERE MOST NEEDED

Patent Handle STANDS UP BY ITSELF if you want it to stand up

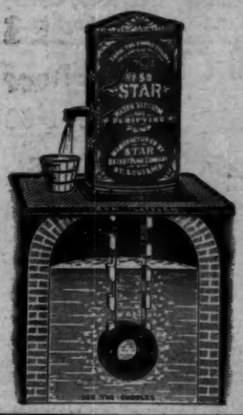


You CAN'T AFFORD to be Without Prices. Write Us.

Address DIVISION 5

SIMMONS HARDWARE COMPANY INCORPORATED

ST. LOUIS, MO. NEW YORK CITY.



Drink Pure Water

The No. 50 Star Pump shown here will positively purify the water in any well or cistern in a short time.

This purifying feature alone makes it the only pump fit to put in any well where the water is used for household purposes, for it will surely save its cost in the Doctor's bill many times over.

Then it is a very substantial and handsome outfit, and will last for years.

Our line of purifying pumps is very complete. So is our line of Galvanized Chain Pump Curbs and Tubing.

Ask your jobber for Star Pumps.

STAR BUCKET PUMP CO.
ST LOUIS, MO.

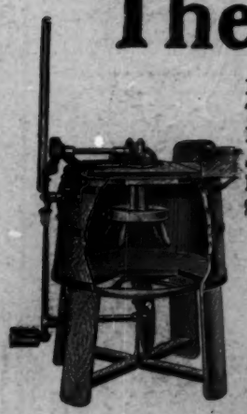
The Largest Assortment of HONES in the world.

Also a complete line of cutlery, razor strops and hardware specialties.

S. R. DROESCHER, Importer and Mfr.
79 Warren St., New York, N. Y.

-SHELVING-
WARREN SYSTEM
SELF PAYING
HARDWARE STORE EQUIPMENT
IN INTERCHANGEABLE SECTIONS
& SCREW, BOLT & GUN CASES.
J. D. WARREN MFG. CO. CHICAGO U.S.A.

The White Washer



DOUBLE BALL BEARING. FLY WHEEL UNDER THE TUB. HIGHEST SPEED. EASIEST RUNNING. QUICKER REVERSE. FOOT POWER ATTACHMENT. TUB OPENS WHEN MACHINE IS IN FULL MOTION. FIVE YEARS' GUARANTEE. SOLD TO ONLY ONE DEALER IN EACH TOWN.

Ask for Exclusive Agency
and Get Acquainted With

The White Way

White Lily Manufacturing Co.
1500 Rockingham Road, - Davenport, Iowa

F. D. Burgess, Waupaca, Wis., writes:

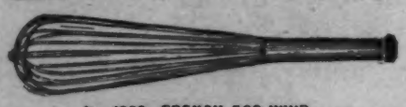
"Please take out advertisement for Tinner, I have one in sight that I think I shall get. I have had all kinds of letters from men in this state, Ills., Iowa and Minnesota. I am running tin and plumbing shop here in connection with the Union Stove Co."

Hotels, Bakers, Confectioners and Household

18th Century Quality **WIRE GOODS** 20th Century Ideas and Prices

The jobbers and the large dealers in and around New York know of the high quality of this line of wire goods which is manufactured in my own factory. Some of them have been continuous customers for 16 years, and they have had practically a monopoly of the line.

The capacity of our factory has been doubled in the past year because the housewife has found the economy of paying a little more for a REAL EGG WHIP than for an imitation one, made of picture wire and tin. You will find a demand for this entire line if you will stock some of the goods, and I mention below a few of the articles which are in ready demand.



No 1560—FRENCH EGG WHIP

12-in.....$2.25 per doz. 16-in.....$3.75 per doz.
14-in..... 3.00 per doz. 18-in..... 4.50 per doz.
16-in..... 3.38 per doz. 20-in..... 6.00 per doz.

WRITE FOR DISCOUNTS

No. 1509—FRENCH SALAD BASKET

6-in., $7.50 per doz. 10-in., $16.50 per doz.
7-in., 9.00 per doz. 11-in., 18.75 per doz.
8-in., 12.00 per doz. 12-in., 21.50 per doz.
9-in., 13.50 per doz.

WRITE FOR DISCOUNTS

No. 1554—INFANTS' BOTTLE HOLDERS

Holding 6 Bottles.....$7.50 per doz.
Holding 8 Bottles..... 8.25 per doz.
Holding 12 Bottles..... 9.75 per doz.

WRITE FOR DISCOUNTS

Ask for catalogue of Wooden Ware, Household Goods and Alcohol Appliances for heating, lighting and cooking.

OTTO THURNAUER.

BOSTON, MASS.
James H. Turner,
93-95 Pearl St.

IMPORT MANUFACTURING EXPORT

310-318 SIXTH AVENUE,
NEW YORK,

JACKSON, MICH.
Reginald F. Fennell,
Carter Building

Agate NICKEL-STEEL Ware

AGATE L & G Mfg. Co. NICKEL-STEEL WARE

is absolutely free from poisonous substance, is made by careful, experienced men, by a company founded in 1850. The first enameled ware and blue and white ware made in this country was made in our mills. We know how to make enameled ware safe and durable. We make it safe and durable because we are proud of the trade mark. Look for the blue label.

Lalance & Grosjean Mfg. Co.

Chicago New York Boston

SIMMONS' HODS

"Double Bottom" Handy Handle

Mr. Dealer:

How much Profit do you make on Coal Hods?

You can make more on "Ours".

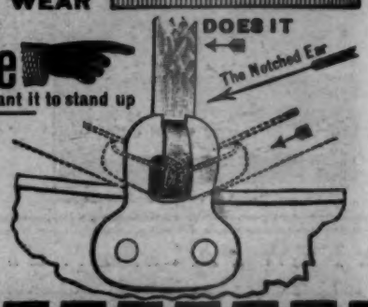
WHY? BECAUSE—

"Double Bottom" GIVES OVER TWICE THE WEAR

AND

Wire-Bound TOP AND BOTTOM
STRONGEST WHERE MOST NEEDED

Patent Handle
STANDS UP BY ITSELF if you want it to stand up



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Address DIVISION 5

SIMMONS HARDWARE COMPANY
INCORPORATED

ST. LOUIS, MO. NEW YORK CITY.

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Our line of purifying pumps is very complete. So is our line of Galvanized Chain Pump Curbs and Tubing.

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STAR BUCKET PUMP CO.
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The Largest Assortment of HONES in the world.

Also a complete line of cutlery, razor strops and hardware specialties.

S. R. DROESCHER, Importer and Mfr.
79 Warren St., New York, N. Y.

— SHELVING —
WARREN SYSTEM
SELF PAYING
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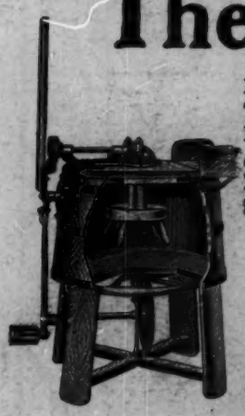
The White Washer



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18th Century Quality

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No 1566—FRENCH EGG WHIP

12-in.....$2.25 per doz. 16-in.....$3.75 per doz.
14-in..... 3.00 per doz. 18-in..... 4.50 per doz.
16-in..... 3.38 per doz. 20-in..... 6.00 per doz.

WRITE FOR DISCOUNTS

No. 1569—FRENCH SALAD BASKET

6-in., $7.50 per doz. 10-in., $16.50 per doz.
7-in., 9.00 per doz. 11-in., 18.75 per doz.
8-in., 12.00 per doz. 12-in., 21.50 per doz.
9-in., 13.50 per doz.

WRITE FOR DISCOUNTS

No. 1564—INFANTS' BOTTLE HOLDERS

Holding 6 Bottles.....$7.50 per doz.
Holding 8 Bottles..... 8.25 per doz.
Holding 12 Bottles..... 9.75 per doz.

WRITE FOR DISCOUNTS

Ask for catalogue of Wooden Ware, Household Goods and Alcohol Appliances for heating, lighting and cooking.

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BOSTON, MASS.
James H. Turner,
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IMPORT MANUFACTURING EXPORT

JACKSON, MICH.
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310-318 SIXTH AVENUE,
NEW YORK,

Agate NICKEL-STEEL Ware

AGATE L&G Mfg. Co. NICKEL-STEEL WARE

is absolutely free from poisonous substance, is made by careful, experienced men, by a company founded in 1850. The first enameled ware and blue and white ware made in this country was made in our mills. We know how to make enameled ware safe and durable. We make it safe and durable because we are proud of the trade mark. Look for the blue label.

Lalance & Grosjean Mfg. Co.

Chicago New York Boston

SEP 21 1908

JUNIATA HORSE SHOES

The experience of forty-five years of progressive manufacture makes Juniata horse and mule shoes perfect in shape, finish and quality of metal.

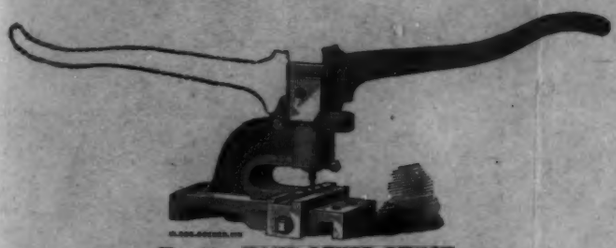
The true worth of the Juniata shoe begins at our mines and continues through our blast furnaces where the different ores are amalgamated. In our own melting processes the character of the metal is established, and from thence through our rolling mills is given the final and unchangeable quality.

Then comes the cutting, shaping, creasing and punching, to do which our old Shoenberger mill in Pittsburg is equipped with every known modern appliance and facility, superintended and manned by men who have spent their lives in becoming masters, each in his particular line.

We offer the Juniata shoe as the product of the greatest mines, steel producing plants and fabricating mills in the world; and with these good facilities and the old and skilled employes back of them, is maintained the highest standard of excellence possible for human ingenuity to produce.

CORNICE BRAKE

No. 59. HAND LEVER SHEARS
Will cut No. 16 Gauge material, a swath of 3¼-inch.
Weight, 20 pounds.



No. 61. HAND LEVER PUNCH
Will punch $\frac{3}{16}$-inch holes in ⅛-inch iron.

The J. M. Robinson Mfg. Co.
3282 to 3288 Spring Grove Avenue
CINCINNATI, O., U. S. A.

As the wind is to the sails, so is advertising to the sales.

An ad in THE AMERICAN ARTISAN will bring sales.

DRIVE THESE TANDEM!

"Enterprise" Meat Choppers and

"Enterprise" Sausage Stuffers and Lard Presses

Every user of an **"Enterprise" Sausage Stuffer and Lard Press** needs an **"Enterprise" Meat Chopper.** Sell them together. Push them together. Drive them "tandem."

Every dealer, and almost every buyer, knows the superiority of genuine "Enterprise" Choppers.

Lest you forget, we remind you of these points about the **"Enterprise" Sausage Stuffer and Lard Press:**

Accurately-bored cylinder. Lips on the inner tin cylinder to make easy its handling when heated. No hot iron cylinder to handle when pressing lard. A patent latch which prevents breaking of plates. Patent corrugated spout prevents air entering the casing, thus assuring preservation of sausage.

Write for catalogue describing, illustrating and listing these and other "Enterprise" specialties. Get our advertising aids for dealers.

The Enterprise Mfg. Co. of Pa.
Philadelphia, U. S. A.
21 Murray Street, New York 438 Market Street, San Francisco

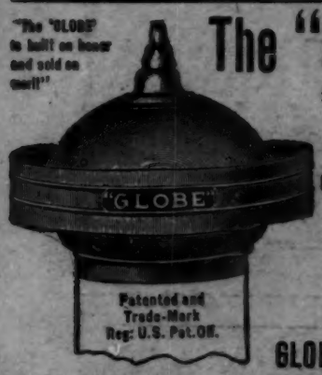
PER. NOT END.

THE IMPROVED ONE-PIECE MITER

This miter is made absolutely correct, true to shape, size, and bead, and the easiest connecting slip joint. Will save your time and temper. In case your supply house cannot furnish them, send your order direct to the

J. E. WHITACRE MFG. CO.
ROCKFORD, ILL.
Manufacturers of Sheet Metal Specialties.

"The 'GLOBE' is built on honor and sold on merit"



The "GLOBE" Ventilator

in COPPER, GALVANIZED IRON and with Glass Tops for Skylight purposes.

ABSOLUTELY STORM PROOF

For Perfectly Ventilating Schools, Churches, Halls, Mills, Factory and Audience Rooms of Every Character

SMOKY CHIMNEYS CURED

"GLOBE VENTILATED RIDGING"

Send for Pamphlet

MANUFACTURED BY

GLOBE VENTILATOR CO., Troy, N. Y.

We have installed Machines for decorating Cans and would be pleased to submit estimates upon request.

STUBER & KUCK, Peoria, Ill.

DON'T RUN SHORT

"Chill November's dreary blasts" will soon be on us.

Remember SECURITY Nested Stove Pipe

Simple, practical, economical, easily put together; makes a tight, rigid joint. PACKED 25 JOINTS IN A CRATE. Made from

FOLLANSBEE BLUE STEEL SHEETS

Uniform color, carefully oiled. Keep it in stock. It's as good as wheat in the mill. Sold by

FOLLANSBEE BROTHERS COMPANY

ONLY AMERICAN USERS OF THE

HAMMERED OPEN HEARTH PROCESS

IN MAKING

FINE STEEL SHEETS
HIGH GRADE ROOFING TIN
BRILLIANT BRIGHT TIN PLATE

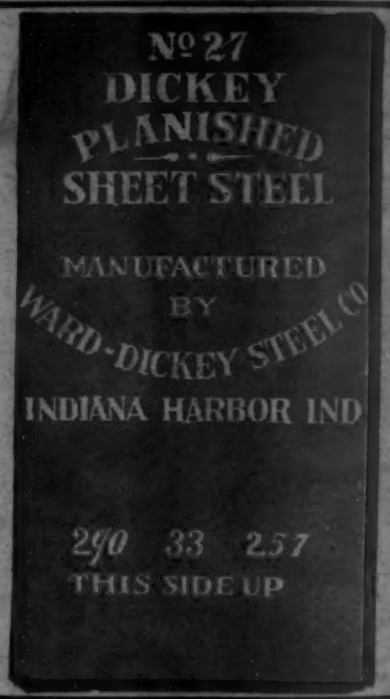
MAIN OFFICE:

PITTSBURGH

BRANCH OFFICES:

LOUISVILLE, BUFFALO, MEMPHIS, CLEVELAND, MILWAUKEE, INDIANAPOLIS, NORFOLK, ROCHESTER, NASHVILLE, DETROIT, NEW YORK

Southwestern Distributors, Stockhoff Supply Co., St. Louis.



NEVER BREAKS

The following extract was taken from the correspondence of one of the largest users in the United States.

"We had a Cylinder Stove of Russian iron and another of your steel set up on our show room floors three years ago to test its wearing properties under long heat. Both have had constant fires burning in them, winters, both frequently red hot. The preference in appearance is with the steel. It works like copper; Never breaks."

Quotations gladly made upon specifications. Circular upon request.

SEASONABLE AND SALABLE

THIS IS THE SEASON FOR

Preserving Kettles

And we are in a position to supply the trade with the best designed Preserving Kettles on the market.

Our goods are first-class and sell at reasonable and popular prices.

We manufacture and can supply all the staple items in enameled ware.

OUR LINE CONSISTS OF OVER 300 FAST SELLING ITEMS

Star ★ Enameling & Stamping Co., PITTSBURGH, PA.

This Space for Sale.
Inquire of Daniel Stern,
355 Dearborn St., Chicago

Why Carry Bolts and Screws

Unless your stock of these be supplemented with Star Expansion Shields to fit?

All Styles and Sizes

From a No. 5 Screw Upward

Write For Catalog and Samples Which are Free

STAR EXPANSION BOLT CO., Bayonne, N. J.

Skylights and Cornices

Fireproof Metal Windows
(Glazed with Wire Glass)
Metal Ceilings and Side Walls

Eastlake Metal Shingles

Gutters and Conductors, Roofings of All Kinds.

Send for Catalogues and Prices.

The W. J. Burton Company
Detroit, Mich.

THE "CENTENNIAL"

RAIN-WATER CUT-OFF

The strongest, most durable and cheapest CUT-OFF on the market.

The only single cut off made to fit Corrugated and plain pipe and which can be used without extra pipe or elbows. For sale by all leading jobbers.

Manufactured only by

The Sullivan-Geiger Co.

19 and 21 East South Street, Indianapolis, Ind.